COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution)
(Affiliated to Anna University, Chennai & Approved by AICTE, New Delhi)
Established in 1956, A Unit of V.Rangasamy Naidu Educational Trust
CIVIL AERODROME POST, COIMBATORE-641 014, TAMILNADU, INDIA

Criteria 1 – Curricular Aspects

Key Indicator: 1.1 Curriculum Design and Development

1.1.2   The programmes offered by the institution focus on employability/ entrepreneurship/ skill development and their course syllabi are adequately revised to incorporate contemporary requirements

Contents

1.	Courses offered by department related to employability/ entrepreneurship/ skill development	Open
2.	Courses code and lecture details of employability/ entrepreneurship/ skill development	Open

1.1.2 The programmes offered by the institution focus on employability/ entrepreneurship/ skill development and their course syllabi are adequately revised to incorporate contemporary requirements

Programme code	Programme	Name of the Courses with Course code	Total no of courses employability/ entrepreneurship/ skill development under 2023 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2023 regulation	Total no of courses employability/ entrepreneurship/ skill development under 2015 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2015 regulation	Name of the Courses with Course co	Total no of courses employability entrepreneur ship/ skill development	NA	Name of the Courses
1-1341759247	B.E Civil Engineering	23FYH221 - English Communication Competency Laboratory 23MC102 - Soft Skills - I 23MC301 - Soft Skills – II – Design Thinking 23MC502 - Seminar and Technical Writing 23MC601 - Hackathon; INPLANT TRAINING (V Sem), MINI PROJECT (VI Sem), PROJECT WORK AND VIVA-VOCE (VIII Sem)	8	13	6	6	15CEM31 Complex Variables Fourier Transforms and Partial Differential Equations 15HSS01 Science of Creativity and Professional Ethics 15CE49 Survey Camp (During Vacation - 2 weeks)# 15CE65 Quantity Surveying and Project Planning Laboratory 15CEE43 Entrepreneurship in Civil Engineering 15CEE18 Professional Practice in Civil Engineering	24	24	19CE46 Professional Practices and Ethics 19CEM31 Differential Equations and Boundary Value Problems 19CEOC01 Practical Geotechnical Engineering 19CEOC02 Green Buildings 19CEOC04 Sustainable Architecture 19MCM16 Data Analysis Laboratory for Construction Management 19MCM24 Project Planning Laboratory for Construction Management 19MCME01 Advanced Construction Materials & Equipment 19MCME02 Quality Management for Construction Projects 19MCME06 Construction Risk Management 19MCME12 Lean Construction Concepts, Tools & Practices 19HOC01 English for Employability I 19HOC02 English for Employability II 19HOC01 Communication Skills for Engineers -I 19HOC02 Communication Skills for Engineers -II 19EC11 Calculus and Differential Equations 19EC34 Employability Skills, Communication Skills for Engineers – I*
1-1341759425	B.E. Mechanical Engineering	23MC102Soft Skills 23MC322Design Thinking In plant training Value added Courses I Value added Courses II Seminar and Technical Writing Hackathon Advanced Manufacturing Laboratory Mini Project Project Work	10	16	8	24	15CS02 - C Programming Laboratory 15EEC01 - Employability Skills 15HSS01 - Science of Creativity and Professional Ethics 15ME68 - Mini Project 15ME63 - Automobile Engineering 15ME64 - Control Theory and Mechatronics 15ME75 - Alternate Energy Resources 15ME83 - Project Work	14	22	19HOC31 - Communication Skills for Engineers I 19HOC41 - Communication Skills for Engineers II 19INT51 - Internship I 19ME67 - Mini Project 19HOC51 - Employability and Personality Development Skills – I 19INT61 - Internship II 19HOC61 - Employability and Personality Development Skills – II 19ME73 - Project Phase I 19ME81 - Project Phase II 19MEOC01 - MATLAB Programming 19MEOC02 - Non Destructive Evaluation 19MEOC05 - Foundry Practice and Procedure 19MEOC06 - Basics of Automotive Electrical Systems 19MEOC09 - Inspection and Quality Control in Manufacturing
1-1341759422	BE EEE	23MC102 - Soft Skills, 23FYH221 ENGLISH COMMUNICATION AND COMPETENCY LABORATORY, 23MC322 - Design Thinking, Value Added Course-I, Value Added Course-II, Seminar and technical writing, Mini Project, Hackathon, Project and Viva Voce, In-Plant training	10	16	6	17	15EE48- Comprehensive Learning, 15EE67- Mini Project, 15EE81 - Project Work and Viva Voce, Open Elective I, II, III	19	27	19FYEL11 Employability Skills, 19FYEL21 English for Employability, 19HOC31 Communication Skills For Engineers I*, 19HOC41 Communication Skills For Engineers II*, 19HOC51 Employability and Personality Development Skills - I *,19HOC61 Employability and Personality Development Skills - II *, 19INT51 Internship - I, 19EEL66 Mini Project, 19INT61 Internship - II, 19EE76 Project Work Phase - I, 19EE81 Project Work Phase - II, 19EEOC06 Electrical Safety Standards and Practices, 19EEOC07 Scilab Programming, 19EEOC08 Machine Vision, 19EEOC09 Cyber Security in Manufacturing and Smart Grid, 19EEOC10 Robotics and Automation, 19EEOC12 AWS Cloud Practitioner Essentials, 19EEOC13 Introduction to IoT, 19EEOC14 TCS ION Career Edge Young Professional

Programme code	Programme	Name of the Courses with Course code	Total no of courses employability/ entrepreneurship/ skill development under 2023 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2023 regulation	Total no of courses employability/ entrepreneurship/ skill development under 2015 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2015 regulation	Name of the Courses with Course code	Total no of courses employability/ entrepreneurship/ skill development	NA	Name of the Courses
1-1341759429/1-1341759431	B.E. ECE	23MC102- Soft Skills, 23FYH221 - English Communication Competency Laboratory, 23MC322 - Design Thinking, Community Services and Engineering , Seminar and Technical Writing , Value Added Course I, Value Added Course II , Mini Project , Hackathon, Project Work and Viva-Voce	10	13	8	21	15FY12 - TECHNICAL ENGLISH, 15FY18 - ENGLISH LANGUAGE LABORATORY, 15FY22E - PROFESSIONAL ENGLISH, 15FY22G - BASIC GERMAN,15FY22F - BASIC FRENCH,15EC35-C Programming, 15EC48-Seminar and Technical Writing, 15EC65-Data Structures and Algorithms, 15EC68-Mini Project, 15EC81-Project Work & Viva Voce,	15	23	19FYEL11 Employability Skills, 19FYEL21 English for Employability, 19HOC31-COMMUNICATION SKILLS FOR ENGINEERS - I, 19HOC41-COMMUNICATION SKILLS FOR ENGINEERS - II, 19EC66-Miniproject, 19INT51- Internship-I, 19HOC51 -EMPLOYABILITY AND PERSONALITY DEVELOPMENT SKILL- I, 19INT61-INTERNSHIP-II, 19HOC61-EMPLOYABILITY AND PERSONALITY DEVELOPMENT SKILL- II, 19EC76-PROJECT PHASE I, 19EC81- PROJECT PHASE II, 19ECOC01-BASICS OF PYTHON , 19ECOC02-QUANTITATIVE APTITUDE FOR ENGINEERS/ VERBAL APTITUDE FOR ENGINEERS, 19ECOC03-PROBLEM SOLVING WITH ALGORITHMS AND DATA STRUCTURES, 19ECOC05-PROGRAMMING IN C+

Programme code	Programme	Name of the Courses with Course code	Total no of courses employability/ entrepreneurship/ skill development under 2023 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2023 regulation	Total no of courses employability/ entrepreneurship/ skill development under 2015 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2015 regulation	Name of the Courses with Course co	Total no of courses employability/ entrepreneur ship/ skill development	NA	Name of the Courses
1-1341759433	B.E CSE	23MC322-Design Thinking,Inplant Training,Seminar and Technical Writing,Innovation and Practices,Hackathon, Project Work and Viva Voce	6	12	2	2	15HSS01-Science of Creativity and Professional Ethics,15ONL01-Orientation Program In Entrepreneurship	1	1	19HSS01-Science of Creativity and Professional Ethics
1-1341759437	B.Tech. Chemical Engineering	23MC101 Soft Skills 23MC321 Human Valus and Professional Ethics 23MC322 Design Thinking Community Service and Engineering Value Added Course-I Value Added Course-II MiniProject Seminar and Technical Writing Hackathon Process Economics and Management Project Work and Viva-Voce	11	17	4	13	15CH67 MiniProject 15CH72 Process Economics and Industrial Management 15CH78 Inplant Training 15CH81 Project Work and Viva Voce	12	21	19FYH11 Employability Skills 19HOC31 - Communication Skills for Engineers – I 19HOC41 - Communication Skills for Engineers -II 19HOC51 - Employability and Personality Development Skills – I 19HOC61 - Employability and Personality Development Skills – II 19INT51 Internship - I 19INT61 Internship - II 19CH65 - Mini Project 19CH78 - Project Phase - I 19CH84 - Project Phase - II 19CHL56 - Entrepreneurship Skill Development 19CHE09 - Energy Management in Chemical Industries
7	BTECH IT	23MC102 - Soft Skills 23MC301 - Design Thinking Value Added Course I INPLANT TRAINING Seminar And Technical Writing Value Added Course II MINI PROJECT PROJECT WORK AND VIVA-VOCE	8	11	4	15	15CI17 - Soft Skills Development 15HSS02 - Industrial Economics and Corporate Management 15IT07 - Mini Project 15IT13 - Project Viva-Voce	14	24	19FYEL11 Employability Skills 19FYEL21 English for Employability 19HOC31 - Communication Skills for Engineers – I 19HOC41 - Communication Skills for Engineers -II 19HOC51 - Employability and Personality Development Skills – I 19HOC61 - Employability and Personality Development Skills – II 19INT51 Internship - I 19INT61 Internship - II 19IT65 - Mini Project 19IT75 - Project Phase - I 19IT81 - Project Phase - II 19CIE07 - Entrepreneurship Skill Development 19CIOC06 - Comprehenesive Exam Training 19ITOC01 - Aptitude Training
1-1341759439	M.E Structural Engineering	1. Value Added Course - I 2. 23MSE122 - Research Proposal Writing and IPR 3. 23MSE222 - Finite Element Analysis Laboratory 4. Value Added Course - II 5. 23MSE331 - Practical Training (4 Weeks) 6. 23MSE332 - Project Work Phase I 7. 23MSE441- Project Work Phase II	7	26	4	4	15MCEE1 Stability of Structures 15MCEE6 Health Monitoring 15MCEE10 Theory of Plates of Structures 15MCEE9 Design of Concrete Bridges	2	2	Prefabricated Structures19MCEE18, Energy Efficient Building19MSEOE02

Programme code	Programme	Name of the Courses with Course code	Total no of courses employability/ entrepreneurship/ skill development under 2023 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2023 regulation	Total no of courses employability/ entrepreneurship/ skill development under 2015 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2015 regulation	Name of the Courses with Course co	Total no of courses employability/ entrepreneurship/ skill development	NA	Name of the Courses
1-1341759451	M.E Environmental Engineering and Management	1. Value Added Course - I 2. 23MEN122 - Research Proposal Writing and IPR 3. 23MEN222 - Environmental Microbiology and Quality Analysis Laboratory 4. Value Added Course - II 5. 23MEN331 - Practical Training (4 Weeks) 6. 23MEN332 - Project Work Phase I 7. 23MEN441- Project Work Phase II	7	26	2	2	15MENE6 Ecology and Ecosystem Management 15MENE9 Industrial Wastewater Management	6	6	Industrial Wastewater Treatment and Management19MEN15 Process Engineering Laboratory –II19MEN24 Air and Water Quality Modelling19MENE07 Design of Environmental Engineering Structures19MENE11 Biodegradation and Bioremediation19MENE12 Climate Change and Adaptation19MENOE01, Prefabricated Structures19MCEE18, Energy Efficient Building19MSEOE02
1-1341759465	M.E Construction Management	1. Value Added Course - I 2. 23MCM122 - Research Proposal Writing and IPR 3. 23MCM222 - Advanced Construction Engineering and Experimental Techniques Laboratory 4. Value Added Course - II 5. 23MCM331 - Practical Training (4 Weeks) 6. 23MCM332 - Project Work Phase I 7. 23MCM441- Project	7	26	4	4	15MCME11 Total Quality Management in Construction 15MCME14 Shoring, Scaffolding and Formwork 15MCME16 Health Monitoring of Structures 15MCME17 Valuation of Real Properties	7	7	Data Analysis Laboratory for Construction Management19MCM16 Project Planning Laboratory for Construction Management19MCM24 Advanced Construction Materials & Equipment 19MCME01 Quality Management for Construction Projects19MCME02 Construction Risk Management19MCME06 Lean Construction Concepts, Tools & Practices19MCME12 Landscaping and Architecture19MCMOE01
33	M.Sc.Decision and Computing Sciences	-	NA	NA	6 (17 Regulation)	36	17MDC49 - Managerial Communication Skills 17MDC58 - Personality Development, 17MDC86 - Entreprenuership Development, 17MDC96 - Business Ethics, 17MDC71 - Project and Viva Voce I, 17MDC101 - Project and Viva Voce II	8 (2022 Regulation	44	22MDC19 - Employability Skills, 22MDC28 - English for Employability, 22MDC49 - Personality Development, 22MDC57 - Managerial Communication Skills, 22MDC68 - Hackathon, 22MDC71 - Project and Viva Voce I, 22MDC92 - Business Ethics and Entrepreneurship Development, 22MDC101 - Project Viva Voce II
1-1341759463	MCA	23MCA223 - Soft skills-I 23MCA241 - Mini project	3		NA	NA	23MCA223 - Soft skills-I 20MCA41 - Project and viva voce 23MCA241 - Mini project	NA	NA	NA
31	M.Sc.Software Systems	-	NA	NA	4	39	15MSS49 - Communication Skills & Personality Development, 15MSS71 - Project Work and Viva Voce - I, 15MSS92 - Professional Ethics, 15MSS101 - Project Work and Viva Voce - II	8	44	20MSS19 - Employability Skills, 20MSS28 - English for Employability. 20MSS49 - Personality Development. 20MSS57 - Communications Skills. 20MSS 67 - Hackathon 20MSS71 - Project Work and Viva Voce-I. 20MSS93 - Professional Ethics. 20MSS101 - Project Work and Viva Voce-II
32	M.Sc.Data Science	-	NA	NA	3 (2016 Regulation)	36	16MDS49-Communication Skills and Personality Development, 16MDS71 Project Work and Viva Voce-I, 16MDS101 Project Work and Viva Voce- II	7 (2021 Regulation)	41	21MDS19-English for Employability, 21MDS28-Employability Skills, 21MDS49-Personality Development, 21MDS57-Communication Skills, 21MDS67-Hackathon, 21MDS71-Project Work and Viva Voce-I, 21MDS101-Project Work and Viva Voce-II

Programme code	Programme	Name of the Courses with Course code	Total no of courses employability/ entrepreneurship/ skill development under 2023 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2023 regulation	Total no of courses employability/ entrepreneurship/ skill development under 2015 regulation	Total no. of credits employability/ entrepreneurship/ skill development under 2015 regulation	Name of the Courses with Course code	Total no of courses employability entrepreneurship/ skill development	NA	Name of the Courses
34	MSc. AI&ML	-	NA	NA	NA	NA	NA	17	69	19MAM11 - Technical English 1 19FYEL11 - Employability Skills 1 19MAM18 - Python Programming Lab 3 19FYEL21 - English for Employability 1 19MAM31 - Artificial Intelligence 3 19MAM42 - Machine Learning 3 19MAM59 - Personality Development 1 19MAM62 - Deep Learning 3 19MAM68 - Communication Skills 1 19MAM69 - Hackathon 1 19MAM71 - Project Work and Viva Voce - I 18 19MAM82 - Reinforcement Learning 4 19MAM91 - Computer Vision 3 19MAM101 - Project Work and Viva Voce - II 18 19MAME07 - Natural Language Processing 3 19MAME18 - Cyber Security 3 19MAMEL07 - Generative AI Lab 2

COIMBATORE INSTITUTE OF TECHNOLOGY, COIMBATORE – 641 014

(Autonomous Institution affiliated to ANNA UNIVERSITY, CHENNAI)
DEPARTMENT OF CIVIL ENGINEERING
REGULATIONS 2023 - CHOICEBASEDCREDITSYSTEM

B.E. CIVIL ENGINEERING	
CURRICULA AND SYLLABI	

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYH111	Technical English	HSC	2	2	0	4	4
2	23FYM111	Matrices and Calculus	BSC	3	1	0	4	4
3	23FYP111	Physics for Civil Engineers	BSC	3	0	0	3	3
4	23FYC111	Engineering Chemistry for Civil Engineers	BSC	3	0	0	3	3
5	23CE111	Construction Materials	PCC	3	0	0	3	3
PRACTICALS								
1	23CE121	Engineering Graphics- I	ESC	0	0	4	4	2
2	23CE122	Engineering Practices Laboratory	ESC	0	0	2	2	1
3	23CE123	C Programming Laboratory	ESC	0	0	4	4	2
ONE CREDIT COURSES								
1	23FYH121	Heritage of Tamil	OC	1	0	0	1	1
MANDATORY COURSES								
1	23MC101	Induction Programme	MC	15 DAYS			-	-
2	23MC102	Soft Skills - I	MC	1	0	0	-	-
			TOTAL	17	3	10	30	23

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYH211	Professional English	HSC	3	0	0	3	3
2	23FYM211	Fourier Series and Transforms	BSC	3	1	0	4	4
3	23CE211	Engineering Mechanics	ESC	3	0	0	3	3
4	23CE212	Engineering Geology	ESC	3	0	0	3	3
5	23CE213	Construction Technology	PCC	3	0	0	3	3
PRACTICALS								
1	23FYH221	English Communication Competency Laboratory	HSC	0	0	4	4	2
2	23CE221	Engineering Graphics- II	ESC	0	0	4	4	2
3	23FPC221	Basic Sciences Laboratory	ESC	0	0	4	4	2
ONE CREDIT COURSES								
1	23FYC221	Environmental Science and Engineering	OC	1	0	0	1	1
2	23FYH222	Tamil's & Technology	OC	1	0	0	1	1
CO-CURRICULAR ACTIVITES								
1	23CC	23CC221- NSS	OC	15 HOURS			1	1
2		23CC222- YRC						
3		23CC223- RSP						
4		23CC224- Sports						
			TOTAL	18	1	12	31	25

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23M311	Differential Equations and Random Variables	BSC	3	1	0	4	4
2	23CE311	Mechanics of Solids I	ESC	3	0	0	3	3
3	23CE312	Concrete Technology	PCC	3	0	0	3	3
4	23CE313	Mechanics of Fluids	PCC	3	0	0	3	3
5	23CE314	Surveying	PCC	3	0	0	3	3
PRACTICALS								
1	23CE321	Strength of Materials Laboratory	ESC	0	0	4	4	2
2	23CE322	Survey Laboratory	PCC	0	0	4	4	2
3	23CE323	Building Planning and Drawing	ESC	0	0	4	4	2
MANDATORY COURSES								
1	23MC301	Soft Skills – II – Design Thinking	MC	15 HOURS			1	1
2	23MC302	Human Value and Professional Ethics	MC	15 HOURS			1	1
TOTAL				17	1	12	30	24

SEMESTER 8

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23CE411	Mechanics of Solids II	ESC	3	0	0	3	3
2	23CE412	Highway and Railway Engineering	PCC	3	0	0	3	3
3	23CE413	Applied Hydraulics and Hydraulic Machinery	PCC	3	0	0	3	3
4	23CE414	Water Supply Engineering	PCC	3	0	0	3	3
5	23CE415	Construction Management	HSC	3	0	0	3	3
PRACTICALS								
1	23CE421	Environmental Engineering Laboratory I	ESC	0	0	2	2	1
2	23CE422	Hydraulics Laboratory	PCC	0	0	4	4	2
3	23CE423	Concrete Laboratory	PCC	0	0	4	4	2
MANDATORY COURSES								
1	23MC401	Value Added Course - I	MC	15 HOURS			-	-
2	23MC402	Community Service and Engineering	MC	15 HOURS			-	-
			TOTAL	**17**	**0**	**10**	**27**	**20**

SEMESTER 9

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23CE511	Structural Analysis - I	PCC	3	0	0	3	3
2	23CE512	Design of Reinforced Concrete Structural Elements	PCC	3	0	0	3	3
3	23CE513	Mechanics of Soils	PCC	3	0	0	3	3
4		ELECTIVE –I / OPEN ELECTIVE-I	PEC/OEC	3	0	0	3	3
5		ELECTIVE –II	PEC	3	0	0	3	3
PRACTICALS								
1	23CE521	Highway Engineering Laboratory	PCC	0	0	4	4	2
2	23CE522	Quantity Surveying Laboratory	PCC	0	0	4	4	2
3	23CE523	Geo-Informatics Laboratory	PCC	0	0	4	4	2
	PROJ	INPLANT TRAINING*	PROJECT				1	1
MANDATORY COURSES								
1	23MC501	Value Added Course – II	MC	**15 HOURS**			-	-
2	23MC502	Seminar and Technical Writing	MC	15 HOURS			-	-
			TOTAL	18	0	12	30	22

* 2 weeks of Inplant Training need to be completed during 4th semester vacation

SEMESTER – 10

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23CE611	Structural Analysis - II	PCC	3	0	0	3	3
2	23CE612	Design of Steel Structures	PCC	3	0	0	3	3
3	23CE613	Foundation Engineering	PCC	3	0	0	3	3
4		ELECTIVE –III / OPEN ELECTIVE - II	PEC/OEC	3	0	0	3	3
5		ELECTIVE – IV	PEC	3	0	0	3	3
PRACTICALS								
1	23CE621	Soil Mechanics Laboratory	PCC	0	0	4	4	2
2	23CE622	Project Planning Laboratory	PROJECT	0	0	4	4	2
3	23CE623	Building Information Modelling Laboratory	PCC	0	0	2	2	1
	PROJ	MINI PROJECT	PROJECT	0	0	4	4	2
MANDATORY COURSES								
1	23MC601	Hackathon	MC	15 HOURS			1	1
			TOTAL	16	0	14	30	23

SEMESTER – 11

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23CE711	Waste Water Engineering	PCC	3	0	0	3	3
2	23CE712	Prestressed Concrete Structures	PCC	3	0	0	3	3
3	23CE713	Earthquake Resistant Design of Structures	PCC	3	0	0	3	3
4		ELECTIVE -V	PEC	3	0	0	3	3
5		ELECTIVE -VI	PEC	3	0	0	3	3
PRACTICALS								
1	23CE721	Computer Applications Laboratory	PCC	0	0	4	4	2
2	23CE722	Design and Drawing (Concrete & Steel)	PCC	0	0	4	4	2
3	23CE723	Environmental Engineering Laboratory – II	ESC	0	0	2	2	1
			TOTAL	15	0	10	25	20

SEMESTER – VIII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		ELECTIVE –VII	PEC	3	0	0	3	3
2		ELECTIVE -VIII	PEC	3	0	0	3	3
PRACTICALS								
1	PROJ	PROJECT WORK AND VIVA-VOCE	PROJECT	0	0	12	12	6
			TOTAL	6	0	12	18	12

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DEPARTMENT OF MECHANICAL ENGINEERING
REGULATIONS 2023 - CHOICE BASED CREDIT SYSTEM

B. E. MECHANICAL ENGINEERING

CURRICULA AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	L	T	P	TOTAL CONTACT PERIODS	CREDITS
THEORY								
1	23FYH111	Technical English	HSC	2	2	0	4	4
2	23FYM112	Matrices, Calculus and Differential Equations	BSC	3	1	0	4	4
3	23FYP112	Physics for Mechanical Engineers I	BSC	2	1	0	3	3
4	23FYC112	Chemistry for Mechanical Engineers	BSC	3	0	0	3	3
5	23ME131	C - Programming and Problem-Solving	ESC	2	0	2	4	3
PRACTICALS								
6	23FPC121	Basic Sciences Laboratory I	BSC	0	0	2	2	1
7	23ME121	Engineering Graphics for Mechanical Engineers I	ESC	0	0	4	4	2
8	23ME122	Engineering Practices laboratory	ESC	0	0	2	2	1
MANDATORY COURSE								
9	23FYH121	Heritage of Tamils/ Tamizhar Marabu	HSC	1	0	0	1	1
10	23MC101	Induction Program	MC	-	-	-		0
11	23MC102	Soft Skills	EEC	-	-	-		0
			TOTAL	13	4	10	27	22

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	L	T	P	TOTAL CONTACT PERIODS	CREDITS
THEORY								
1	23FYH211	Professional English / Foreign language	HSC	3	0	0	3	3
2	23FYM212	Fourier Series, Transforms, Difference and Vector Calculus	BSC	3	1	0	4	4
3	23FYP211	Physics for Mechanical Engineers II	BSC	2	1	0	3	3
4	23ME211	Basic Electrical and Electronics Engineering	ESC	3	0	0	3	3

5	23ME212	Materials and Metallurgy	PCC	3	0	0	3	3
PRACTICALS								
6	23FPC222	Basic Sciences Laboratory II	BSC	0	0	2	2	1
7	23ME221	Engineering Graphics for Mechanical Engineers II	ESC	0	0	4	4	2
8	23FYH221	English Communication Competency Laboratory	HSC	0	0	4	4	2
MANDATORY COURSE								
9	23CC	Co-Curricular Activities	MC					1
10	23FYC221	Environmental Science and Engineering	MC	1	0	0	1	1
11	23FYH222	Tamils and Technology / Tamizharum Thozhilnutpamum	MC					1
TOTAL				15	2	10	27	24

SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23M312	Complex Variables and Partial Differential Equations	BSC	3	1	0	4	4
2	23ME311	Engineering Mechanics	ESC	3	1	0	4	4
3	23ME312	Engineering Thermodynamics	ESC	3	1	0	4	4
4	23ME313	Manufacturing Processes I	PCC	3	0	0	3	3
5	23ME314	Metrology and Quality Control	PCC	3	0	0	3	3
PRACTICALS								
6	23ME321	Computer Aided Machine Drawing I	PCC	0	0	4	4	2
7	23ME322	Metrology Laboratory	PCC	0	0	2	2	1
8	23ME323	Moulding and Welding Laboratory	PCC	0	0	2	2	1
MANDATORY COURSE								
9	23MC301	Induction Program	MC					0
10	23MC321	Human Values and Professional Ethics	MC					1
11	23MC322	Design Thinking	EEC					1
			TOTAL	15	3	8	26	24

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Applied Thermodynamics	PCC	3	1	0	4	4
2		Electrical Machines and Drives	ESC	2	0	2	4	3

3		Fluid Mechanics and Machinery	PCC	3	1	0	4	4
4		Manufacturing Processes II	PCC	3	0	0	3	3
5		Strength of Materials	ESC	3	1	0	4	4
PRACTICALS								
6		Computer Aided Machine drawing II	PCC	0	0	2	2	1
7		Fluid Mechanics and Machinery Laboratory	PCC	0	0	2	2	1
8		Material Characterization and Testing Laboratory	PCC	0	0	2	2	1
MANDATORY COURSE								
9		Value Added Course 1	EEC					1
10		Community Service and Engineering	MC					0
			TOTAL	14	3	8	25	22

SEMESTER V

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Design of Machine Elements	PCC	3	1	0	4	4
2		Heat Transfer	PCC	3	1	0	4	4
3		Kinematics of Machinery	PCC	3	1	0	4	4
4		Professional Elective I	PEC	3	0	0	3	3
5		Professional Elective II	PEC	3	0	0	3	3
PRACTICALS								
6		Applied Thermodynamics Laboratory	PCC	0	0	2	2	1
7		Finite Element Analysis Laboratory	PCC	0	0	2	2	1
8		Lathe and Special Machines Laboratory	PCC	0	0	2	2	1
9		In plant training	EEC	0	0	0	0	1
MANDATORY COURSE								
10		Value Added Course - 2	EEC					1
11		Seminar and Technical Writing	EEC					1
			TOTAL	15	3	6	24	24

SEMESTER VI

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Computer Integrated Manufacturing	PCC	3	0	0	3	3
2		Design of Transmission Systems	PCC	3	1	0	4	4
3		Dynamics of Machinery	PCC	3	1	0	4	4

4		Professional Elective III	PEC	3	0	0	3	3
5		Professional Elective IV	PEC	3	0	0	3	3
PRACTICALS								
6		Computer Aided Manufacturing Laboratory	PCC	0	0	2	2	1
7		Dynamics Laboratory	PCC	0	0	2	2	1
8		Heat Transfer Laboratory	PCC	0	0	2	2	1
9		Mini Project	EEC	0	0	4	4	2
MANDATORY COURSE								
10		Hackathon	EEC					1
			TOTAL	**15**	**2**	**10**	**27**	**23**

SEMESTER VII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Control Systems and Mechatronics	PCC	3	1	0	4	4
2		Fluid Power Control Systems	PCC	3	0	0	3	3
3		Operations Research	PCC	3	1	0	4	4
4		Professional Elective V	PEC	3	0	0	3	3
5		Professional Elective VI	PEC	3	0	0	3	3
PRACTICALS								
6		Fluid Power Laboratory	PCC	0	0	2	2	1
7		Mechatronics Laboratory	PCC	0	0	2	2	1
8		Advanced Manufacturing Laboratory	EEC	0	0	2	2	1
			TOTAL	**15**	**2**	**6**	**23**	**20**

SEMESTER VIII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Professional Elective - VII / Open Elective - I	PEC/OEC	3	0	0	3	3
2		Professional Elective - VIII / Open Elective - II	PEC/OEC	3	0	0	3	3
PRACTICALS								
3		Project Work	EEC	0	0	12	12	6
			TOTAL	**6**	**0**	**12**	**18**	**12**

B. E. ELECTRONICS AND COMMUNICATION ENGINEERING

CURRICULA AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYH111	Technical English	HSC	2	2	0	4	4
2	23FYM114	Calculus and Differential Equations	BSC	3	1	0	4	4
3	23FYP114	Physics for Communication Engineering	BSC	3	0	0	3	3
4	23FYC114	Engineering Chemistry	BSC	3	0	0	3	3
5	23EC111	Electrical Engineering and Instrumentation	ESC	3	0	0	3	3
PRACTICALS								
6	23FPC122	Basic Sciences Laboratory	BSC	0	0	4	4	2
7	23EC121	Electrical Engineering and Instrumentation Laboratory	ESC	0	0	2	2	1
8	23EC122	Problem Solving Skills and Practices	ESC	0	0	2	2	1
MANDATORY COURSES								
9	23FYH121	Heritage of Tamils / தமிழர் மரபு	HSC	15 Hours			1	1
10	23MC101	Induction Programme	MC	2 Weeks			2 Weeks	-
11	23MC102	Soft Skills	EEC	15 Hours			1	-
			TOTAL	14	3	8	27	22

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SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYM214	Complex Variables, Laplace Transforms and Fourier Series	BSC	3	1	0	4	4
2	23FYP212	Semiconductor Physics	BSC	3	0	0	3	4
3	23EC211	Problem Solving Using C Programming	ESC	3	0	0	3	3
4	23EC212	Electron Devices	ESC	3	0	0	3	3
5	23EC213	Network Theory	ESC	3	1	0	4	4
PRACTICALS								
6	23FYH221	English Communication Competency Laboratory	HSC	0	0	4	4	2
7	23EC221	C Programming Laboratory	ESC	0	0	2	2	1
8	23EC222	Devices and Circuits Laboratory	ESC	0	0	2	2	1
MANDATORY COURSES								
9	23FYH222	Tamils and Technology / தd ம் 6த ற6 Lм ம்	HSC	15 Hours			1	1
10	23FYC221	Environmental Science and Engineering	HSC	15 Hours			1	1
11	23CC	Co-Curricular Activities*	MC	15 Hours			1	1
		23CC221-NSS						
		23CC222-YRC						
		23CC223-RSP						
		23CC224-SPORTS						
TOTAL				**15**	**2**	**18**	**28**	**24**

SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23M314	Linear Algebra and Probability	BSC	3	1	0	4	4
2	23EC311	Signals and Systems	PCC	3	1	0	4	4
3	23EC312	Analog Electronics	PCC	3	0	0	3	3
4	23EC313	Digital Electronics	PCC	3	0	0	3	3
5	23EC314	Electromagnetic Fields and Transmission Lines	PCC	3	1	0	4	4
PRACTICALS								
6	23EC321	Analog Electronics Laboratory	PCC	0	0	3	3	1.5
7	23EC322	Digital Electronics Laboratory	PCC	0	0	3	3	1.5
8	23EC323	Python Programming Laboratory	ESC	0	0	2	2	1
MANDATORY COURSES								
9	23MC301	Induction Programme	MC	1 Week				
10	23MC321	Human Values and Professional Ethics	MC	15 Hours			1	1
11	23MC322	Design Thinking	EEC	15 Hours			1	1
TOTAL				15	3	8	28	24

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Antennas and Wave Propagation	PCC	3	0	0	3	3
2		Principles of Communication	PCC	3	1	0	4	4
3		Linear Integrated Circuits	PCC	3	0	0	3	3
4		Microcontroller based Systems	PCC	3	1	0	4	4
5		Data structures and Algorithms	PCC	3	1	0	4	4
PRACTICALS								
6		Linear Integrated Circuits Laboratory	PCC	0	0	3	3	1.5
7		Microcontrollers Laboratory	PCC	0	0	3	3	1.5
8		Data structures and Algorithms Laboratory	PCC	0	0	2	2	1
MANDATORY COURSES								
9		Community Services and Engineering	EEC	15 Hours			-	-
10		Value Added Course I	MC	15 Hours			-	-
11								
TOTAL				15	3	8	26	22

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Control Systems	PCC	3	1	0	4	4
2		Digital Signal Processing	PCC	3	1	0	4	4
3		Embedded Systems and IoT	PCC	3	0	0	3	3
4		Elective –I	PEC/ OEC	3	0	0	3	3
5		Elective –II	PEC	3	0	0	3	3
PRACTICALS								
6		Signal Processing Laboratory	PCC	0	0	2	2	1
7		Embedded Systems and IoT Laboratory	PCC	0	0	2	2	1
8		DBMS Laboratory	PCC	0	0	2	2	1
		In-Plant Training*	EEC	2 Weeks		-		1
MANDATORY COURSES								
9		Seminar and Technical Writing	EEC	15 Hours			1	1
10		Value Added Course II	EEC	15 Hours			-	-
TOTAL				15	1	6	22	22

* IN-PLANT TRAINING to be completed in fourth semester

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		VLSI Design	PCC	3	0	0	3	3
2		Digital Communication	PCC	3	1	0	4	4
3		Data Communication Networks	PCC	3	0	0	3	3
4		Elective -III	PEC/ OEC	3	0	0	3	3
5		Elective – IV	PEC	3	0	0	3	3
PRACTICALS								
6		VLSI Design Laboratory	PCC	0	0	2	2	1
7		Analog and Digital Communication Laboratory	PCC	0	0	2	2	1
8		Java Programming Laboratory	PCC	0	0	2	2	1
9		Mini Project	EEC	0	0	4	4	2
MANDATORY COURSES								
10		Hackathon	EEC	15 Hours				1
TOTAL				15	1	10	26	22

SEMESTER VII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Digital Image Processing	PCC	3	1	0	4	4
2		Wireless Communication and Networks	PCC	3	0	0	3	3
3		Microwave Engineering and Optical Communication	PCC	4	0	0	4	4
4		Elective -V	PEC	3	0	0	3	3
5		Elective -VI	PEC	3	0	0	3	3
PRACTICALS								
6		Wireless Communication and Networking Laboratory	PCC	0	0	2	2	1
7		Microwave Engineering and Optical Communication Laboratory	PCC	0	0	2	2	1
8		Electronic Systems Design Laboratory	PCC	0	0	2	2	1
TOTAL				**16**	**1**	**6**	**23**	**20**

SEMESTER VIII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
		ELECTIVE –VII	PEC	3	0	0	3	3
		ELECTIVE -VIII	PEC	3	0	0	3	3
PRACTICALS								
		Project Work and Viva-Voce	EEC	0	0	12	6	6
TOTAL				**6**	**0**	**12**	**12**	**12**

B.E. – ELECTRICAL AND ELECTRONICS ENGINEERING

CURRICULUM AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYH111	Technical English	HSC	2	2	0	4	4
2	23FYM113	Linear Algebra and Calculus	BSC	3	1	0	4	4
3	23FYP113	Electron Devices	BSC	3	0	0	3	3
4	23FYC113	Electrochemical Technologies	BSC	3	0	0	3	3
5	23EE111	Basics of Civil and Mechanical Engineering	ESC	4	0	0	4	4
PRACTICALS								
6	23FPC122	Basic Sciences Laboratory	BSC	0	0	4	4	2
7	23EE121	Engineering Design Laboratory	ESC	0	0	4	4	2
8	23EE122	Engineering Graphics	ESC	0	0	2	2	1
ONE CREDIT COURSES								
9	23FYH121	Heritage of Tamils/□□□□□□ □□□□	OCC				15	1
MANDATORY COURSES								
10	23MC101	Induction Programme	MC				15 Days	-
11	23MC102	Soft Skills	MC				15	-
			TOTAL	**15**	**3**	**10**	**28**	**24**

SEMESTER II

COURSE CODE		COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYM213	Differential Equations and Numerical Methods	BSC	3	1	0	4	4
2	23EE211	Electric and Magnetic Circuits	PCC	3	0	0	3	3
3	23EE212	Electrical Measurements and Instrumentation	PCC	3	0	0	3	3
4	23EE213	Digital Electronics	ESC	3	0	0	3	3
5	23EE214	Analog Electronic Circuits	PCC	3	0	0	3	3
PRACTICAL								
6	23FYH221	English Communication and Competency Laboratory	HSC	0	0	4	4	2
7	23EE221	Analog and Digital Electronics Laboratory	PCC	0	0	4	4	2
8	23EE222	C Programming and Databases Laboratory	PCC	0	0	4	4	2
ONE CREDIT COURSES								
9	23FYC221	Environmental Science and Engineering	OCC				15	1
10	23FYH222	Tamils and Technology	OCC				15	1
11	23CC	Co-Curricular Activities* 23CC221- NSS 23CC222- YRC 23CC223- RSP 23CC224- Sports	OCC				15	1
			TOTAL	15	1	12	28	25

SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23M313	Complex Analysis and Transforms	BSC	3	1	0	4	4
2	23EE311	Electric Circuit Analysis	PCC	3	1	0	4	4
3	23EE312	Electromagnetic Fields	PCC	3	1	0	4	4
4	23EE313	DC Machines and Transformers	PCC	3	0	0	3	3
5	23EE314	Linear Integrated circuits	PCC	3	0	0	3	3
PRACTICALS								
6	23EE321	DC Machines and Transformers Laboratory	PCC	0	0	3	3	1.5
7	23EE322	Linear Integrated Circuits Laboratory	PCC	0	0	2	2	1
8	23EE323	OOPS and C++ Laboratory	PCC	0	0	3	3	1.5
ONE CREDIT COURSES								
9	23MC321	Human Values and Professional Ethics	OCC				15	1
10	23MC322	Design Thinking	OCC				15	1
MANDATORY COURSES								
11	23MC301	Induction Programme	MC				One week	-
			TOTAL	15	3	8	26	24

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		AC Rotating Machines	PCC	3	0	0	3	3
2		Transmission and Distribution of Electrical Power	PCC	3	0	0	3	3
3		Signals and Networks	PCC	3	1	0	4	4
4		Control Systems	PCC	3	1	0	4	4
5		Digital System Design	PCC	3	0	0	3	3
PRACTICALS								
6		AC Rotating Machines Laboratory	PCC	0	0	3	3	1.5
7		Control & Instrumentation Laboratory	PCC	0	0	2	2	1
8		Digital System Design Laboratory	PCC	0	0	3	3	1.5
ONE CREDIT COURSES								
9		Value Added Course-I	OCC				15	1
MANDATORY COURSES								
10		Community Service and Engineering	MC				15	-
			TOTAL	15	2	8	25	22

SEMESTER V

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Power System Analysis	PCC	3	0	0	3	3
2		Power Electronics	PCC	3	1	0	4	4
3		Embedded System Design	PCC	3	0	0	3	3
4		Elective –I	PEC	3	0	0	3	3
5		Elective –II	PEC	3	0	0	3	3
PRACTICALS								
6		Power System Simulation Laboratory	PCC	0	0	2	2	1
7		Power Electronics Laboratory	PCC	0	0	2	2	1
8		Embedded System Design Laboratory	PCC	0	0	2	2	1
9		In-Plant Training	EEC	-	-	-		1
ONE CREDIT COURSES								
10		Value Added Course-II	OCC				15	1
11		Seminar and Technical Writing	OCC				15	1
			TOTAL	15	1	6	22	22

SEMESTER VI

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Digital Protection of Power Systems	PCC	3	0	0	3	3
2		Electric Vehicles	PCC	3	0	0	3	3
3		Data Structures and Algorithms	PCC	3	0	0	3	3
4		Elective –III	PEC	3	0	0	3	3
5		Elective –IV	PEC	3	0	0	3	3
PRACTICALS								
6		Power and Energy Laboratory	PCC	0	0	2	2	1
7		Electric Vehicle Laboratory	PCC	0	0	2	2	1
8		IoT Laboratory	PCC	0	0	2	2	1
9		Mini Project	EEC	0	0	4	4	2
ONE CREDIT COURSES								
10		Hackathon	OCC				15	1
			TOTAL	15	0	10	25	21

SEMESTER VII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Generation of Electrical Energy	PCC	3	0	0	3	3
2		Solid State Drives and Control	PCC	3	0	0	3	3
3		Smart Grid	PCC	3	0	0	3	3
4		Elective -V	PEC	3	0	0	3	3
5		Elective -VI	PEC	3	0	0	3	3
PRACTICALS								
6		Electrical Drives Laboratory	PCC	0	0	3	3	1.5
7		Industrial Automation Laboratory	PCC	0	0	3	3	1.5
8		Reverse Engineering and Product Realization Laboratory	PCC	0	0	2	2	1
			TOTAL	15	0	8	23	19

SEMESTER VIII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1		Elective –VII	PEC	3	0	0	3	3
2		Elective -VIII	PEC	3	0	0	3	3
PRACTICALS								
3		PROJECT WORK AND VIVA-VOCE	EEC	0	0	12	12	6
			TOTAL	6	0	12	18	12

B. E. Computer Science and Engineering

CURRICULA AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYH111	Technical English	HSC	2	2	0	4	4
2	23FYM115	Matrices and Vector Calculus	BSC	3	1	0	4	4
3	23FYP115	Applied Physics	BSC	3	0	0	3	3
4	23FYC115	Applied Chemistry -I	BSC	3	0	0	3	3
5	23CS111	C Programming	ESC	3	0	0	3	3
PRACTICALS								
1	23FYH122	English Communication Skills Laboratory	BSC	0	0	2	2	1
2	23CS121	Engineering Graphics	BSC	0	0	2	2	1
3	23CS122	C Programming Laboratory	ESC	0	0	4	4	2
MANDATORY COURSES								
1	23FYH121	Heritage of Tamils	HSC	15 Hours			15 Hours	1
2	23MC101	Induction Programme	MC	15 Days			15 Days	--
3	23MC102	Soft Skills	EEC	15 Hours			15 Hours	--
			TOTAL	14	3	8	25	22

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23FYM215	Fourier Series and Differential Equations	BSC	3	1	0	4	4
2	23CS211	Electron Devices	BSC	3	0	0	3	3
3	23FYC211	Applied Chemistry -II	BSC	3	0	0	3	3
4	23CS212	Digital Design	ESC	3	0	0	3	3
5	23CS213	Object Oriented Programming	ESC	3	0	0	3	3
PRACTICALS								
1	23CS221	Digital Design Laboratory	ESC	0	0	2	2	1
2	23CS222	Object Oriented Programming Laboratory	ESC	0	0	2	2	1
3	23FPC221	Basic Sciences Laboratory	HSC	0	0	4	4	2
MANDATORY COURSES								
1	23CC221/ 23CC222/ 23CC223/ 23CC224	Co-Curricular Activities- NSS/YRC/RSP/Sports	MC	15 Hours			15 Hours	1
2	23FYC221	Environmental Science and Engineering	HSC	15 Hours			15 Hours	1
3	23FYH222	Tamils and Technology	HSC	15 Hours			15 Hours	1
TOTAL				15	1	08	24	23

4

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23M315	Linear Algebra and Complex Variables	BSC	3	1	0	4	4
2	23CS311	Data Structures and Algorithms	PCC	3	1	0	4	4
3	23CS312	Discrete Mathematics	BSC	3	0	0	3	3
4	23CS313	Operating Systems	PCC	3	0	0	3	3
5	23CS314	Java Programming	PCC	3	0	0	3	3
PRACTICALS								
1	23CS321	Data Structures and Algorithms Laboratory	PCC	0	0	3	3	1.5
2	23CS322	Operating Systems Laboratory	PCC	0	0	3	3	1.5
3	23CS323	Java Programming Laboratory	PCC	0	0	2	2	1
MANDATORY COURSES								
1	23MC301	Induction Programme	MC	1 Week			1 Week	-
2	23MC321	Human Values and Professional Ethics	MC	15 Hours			15 Hours	1
3	23MC322	Design Thinking	EEC	15 Hours			15 Hours	1
TOTAL				15	2	8	25	23

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	T1	Design and Analysis of Algorithm	PCC	3	1	0	4	4
2	T2	Database Management Systems	PCC	3	0	0	3	3
3	T3	Statistical Data Analysis	BSC	3	0	0	3	3
4	T4	Computer Architecture	PCC	3	0	0	3	3
5	T5	Formal Languages and Automata Theory	PCC	3	0	0	3	3
PRACTICALS								
1	P1	Database Management Systems Laboratory	PCC	0	0	3	3	1.5
2	P2	Design and Analysis of Algorithm Laboratory	PCC	0	0	3	3	1.5
3	P3	Python Programming	BSC	0	0	4	4	2
MANDATORY COURSES								
1	MC1	Value Added Course - I	EEC	15 Hours			15 Hours	-
2	MC2	Community Service and Engineering	MC	15 Hours			15 Hours	-
TOTAL				15	1	10	26	21

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	T1	Computer Networks	PCC	3	0	0	3	3
2	T2	Software Engineering	PCC	2	0	2	4	3
3	T3	Compiler Design	PCC	3	1	0	4	4
4	T4	Elective –I	PEC	3	0	0	3	3
5	T5	Elective –II	PEC	3	0	0	3	3
PRACTICALS								
1	P1	Computer Networks Laboratory	PCC	0	0	2	2	1
2	P2	Compiler Design Laboratory	PCC	0	0	3	3	1.5
3	P3	Web Technology Laboratory	PCC	0	0	3	3	1.5
		Inplant Training	EEC	2 weeks			2 weeks	1
MANDATORY COURSES								
1	MC1	Seminar And Technical Writing	EEC	15 Hours			15 Hours	1
2	MC2	Value Added Course - II	MC	15 Hours			15 Hours	-
TOTAL				14	1	10	25	22

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	T1	Embedded Systems and Internet Of Things	PCC	3	0	0	3	3
2	T2	Machine Learning	PCC	3	0	0	3	3
3	T3	Data Mining and Data Warehousing	PCC	3	0	0	3	3
4	T4	Elective - III	PEC	3	0	0	3	3
5	T5	Elective - IV	PEC	3	0	0	3	3
PRACTICALS								
1	P1	Embedded Systems & Internet of Things Laboratory	PCC	0	0	3	3	1.5
2	P2	Machine Learning Laboratory	PCC	0	0	3	3	1.5
3	P3	Exploratory Data Analysis Laboratory	PCC	0	0	2	2	1
		Innovation and Practices	EEC	0	0	4	4	2
MANDATORY COURSES								
1	MC1	HACKATHON	EEC	15 Hours			15 Hours	1
TOTAL				15	0	12	27	22

SEMESTER VII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	T1	Artificial Intelligence	PCC	3	1	0	4	4
2	T2	Cryptography and Network Security	PCC	3	1	0	4	4
3	T3	Big Data Analytics	PCC	3	0	0	3	3
4	T4	Elective -V	PEC	3	0	0	3	3
5	T5	Elective –VI	PEC	3	0	0	3	3
PRACTICALS								
1	P1	Artificial Intelligence Laboratory	PCC	0	0	3	3	1.5
2	P2	Network Security Laboratory	PCC	0	0	2	2	1
3	P3	Big Data Analytics Laboratory	PCC	0	0	3	3	1.5
TOTAL				15	2	8	25	21

SEMESTER VIII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	T1	Elective –VII	PEC/OEC	3	0	0	3	3
2	T2	Elective –VIII	PEC/OEC	3	0	0	3	3
PRACTICALS								
1	P1	Project Work and Viva-Voce	EEC	0	0	12	12	6
TOTAL				6	0	12	18	12

CURRICULA AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1	23FYH111	Technical English	HSC	2	2	0	4	4
T2	23FYM115	Matrices and Vector Calculus	BSC	3	1	0	4	4
T3	23FYP115	Applied Physics	BSC	3	0	0	3	3
T4	23FYC115	Applied Chemistry-I	BSC	3	0	0	3	3
T5	23IT111	Problem Solving using C	ESC	3	0	0	3	3
PRACTICALS								
P1	23FPC122	Basic Sciences Laboratory	BSC	0	0	4	4	2
P2	23IT121	Engineering Graphics	ESC	0	0	4	4	2
P3	23IT122	C Programming Laboratory	ESC	0	0	2	2	1
MANDATORY COURSES								
MC1	23MC101	Induction Programme	MC	15 Days			-	-
MC2	23FYH121	Heritage of Tamils	MC	15 Hrs			-	1
MC3	23MC102	Soft Skills	EEC	15 Hrs			-	-
			TOTAL	14	3	10	27	23

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			T TAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1	23FYM215	Fourier Series and Differential Equations	BSC	3	1	0	4	4
T2	23IT211	Electronic Devices	BSC	3	0	0	3	3
T3	23IT212	Digital Logic and Design	PCC	3	0	0	3	3
T4	23IT213	Python Programming	PCC	3	0	0	3	3
T5	23IT214	Computational Thinking	PCC	3	0	0	3	3
PRACTICALS								
P1	23FYH221	English Communication Competency Laboratory	HSC	0	0	4	4	2
P2	23IT221	Digital Logic and Design Laboratory	PCC	0	0	2	2	1
P3	23IT222	Python Programming Laboratory	PCC	0	0	2	2	1
MANDATORY COURSES								
MC1	23CC221 23CC222 23CC223 23CC224	Cocurricular Activities* NSS YRC RSP Sports	MC	15 Hrs			-	1
MC2	23FYC221	Environmental Science and Engineering	MC	15 Hrs			-	1

MC3	23FYH222	Tamils and Technology (தமிழ் தொழில்நுட்பம்)	MC	15 Hrs			-	1
TOTAL				**15**	**1**	**8**	**24**	**23**

SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1		Linear Algebra, Complex Variables and Transforms	BSC	3	1	0	4	4
T2		Data Structures and Algorithms-I	PCC	3	1	0	4	4
T3		Computer Organization and Architecture	PCC	3	0	0	3	3
T4		Object Oriented Paradigms and Java	PCC	3	0	0	3	3
T5		Database Systems	PCC	3	0	0	3	3
PRACTICALS								
P1		Data Structures and Algorithms Laboratory	PCC	0	0	2	2	1
P2		Database Systems Laboratory	PCC	0	0	2	2	1
P3		Object Oriented Paradigms and Java Laboratory	PCC	0	0	4	4	2
MANDATORY COURSES								
MC1		INDUCTION PROGRAMME	MC	1 Week			-	-
MC2		Human Values and Professional Ethics	MC	15 Hrs			-	1
MC3		Design Thinking	EEC	15 Hrs			-	1
			TOTAL	**15**	**2**	**8**	**25**	**23**

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1		Discrete Mathematics and Automata Theory	PCC	3	1	0	4	4
T2		Computer Networks	PCC	3	0	0	3	3
T3		Internet Technology and Web Services	PCC	3	0	0	3	3
T4		Principles of Operating Systems	PCC	3	0	0	3	3
T5		Data Structures and Algorithms-II	PCC	3	1	0	4	4
PRACTICALS								
P1		Computer Network Programming Laboratory	PCC	0	0	4	4	2
P2		Internet Technology and Web Services Laboratory	PCC	0	0	4	4	2
P3		Operating Systems Laboratory	PCC	0	0	2	2	1
MANDATORY COURSES								
MC1		Value Added Course I	EEC	15 Hrs			-	-
MC2		Community Services and Engineering	MC	15 Hrs			-	-
			TOTAL	**15**	**2**	**10**	**27**	**22**

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1		Statistics for Data Science and Data Mining	PCC	3	1	0	4	4
T2		Principles of Software Engineering	PCC	3	0	0	3	3
T3		Embedded Systems and IoT	PCC	3	0	0	3	3
T4		ELECTIVE –I	PEC	3	0	0	3	3
T5		ELECTIVE –II	PEC	3	0	0	3	3
PRACTICALS								
P1		Embedded Systems and IoT Lab	PCC	0	0	2	2	1
P2		Data Mining Lab	PCC	0	0	4	4	2
P3		Open Source Systems Lab	PCC	0	0	2	2	1
		INPLANT TRAINING	EEC	14 days			-	1
MANDATORY COURSES								
MC1		Seminar And Technical Writing	EEC	15 Hrs			-	1
MC2		Value Added Course II	EEC	15 Hrs			-	-
			TOTAL	**15**	**1**	**8**	**24**	**22**

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1		Artificial Intelligence	PCC	3	0	0	3	3
T2		Cryptography and Network Security	PCC	3	0	0	3	3
T3		Machine Learning	PCC	3	0	0	3	3
T4		ELECTIVE -III	PEC	3	0	0	3	3
T5		ELECTIVE -IV	PEC	3	0	0	3	3
PRACTICALS								
P1		Artificial Intelligence Laboratory	PCC	0	0	2	2	1
P2		Data Visualization Laboratory	PCC	0	0	4	4	2
P3		Mobile Application Development Laboratory	PCC	0	0	2	2	1
		MINI PROJECT	EEC	0	0	4	4	2
MANDATORY COURSES								
MC1		Hackathon	MC	15 Hrs			-	1
			TOTAL	**15**	**0**	**12**	**27**	**22**

SEMESTER VII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1		Big Data Analytics	PCC	3	0	0	3	3
T2		Cyber-Physical Systems	PCC	3	0	0	3	3
T3		Full Stack Development	PCC	3	1	0	4	4
T4		ELECTIVE –V	PEC	3	0	0	3	3
T5		ELECTIVE –VI	PEC	3	0	0	3	3
PRACTICALS								
P1		Full Stack Development Laboratory	PCC	0	0	2	2	1
P2		Big Data Analytics Laboratory	PCC	0	0	4	4	2
P3		DevOps Laboratory	PCC	0	0	2	2	1
			TOTAL	**15**	**1**	**8**	**24**	**21**

SEMESTER VIII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
T1		ELECTIVE –VII	PEC	3	0	0	3	3
T2		ELECTIVE -VIII	PEC	3	0	0	3	3
PRACTICALS								
P1		PROJECT WORK AND VIVA-VOCE	EEC	0	0	12	12	6
			TOTAL	**6**	**0**	**12**	**18**	**12**

COIMBATORE INSTITUTE OF TECHNOLOGY, COIMBATORE – 641 014
(Autonomous Institution affiliated to ANNA UNIVERSITY, CHENNAI)
DEPARTMENT OF CHEMICAL ENGINEERING
REGULATIONS 2023 - CHOICE BASED CREDIT SYSTEM
CURRICULA AND SYLLABI

B.TECH. CHEMICAL ENGINEERING

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	L	T	P	TOTAL CONTACT PERIODS	CREDITS
THEORY								
1.	23FYH111	Technical English	HSC	2	2	0	4	4
2.	23FYM116	Differential Calculus and Integral Calculus	BSC	3	1	0	4	4
3.	23FYP116	Physics for Chemical Engineers	BSC	3	0	0	3	3
4.	23FYC116	Physical Chemistry	BSC	3	0	0	3	3
5.	23CH111	Mechanics of Solids	ESC	3	0	0	3	3
6.	23CH112	Fundamentals of Computing	ESC	3	0	0	3	3
PRACTICALS								
7.	23CH121	Engineering Graphics	ESC	0	0	2	2	1
8.	23CH122	Computer Laboratory	ESC	0	0	2	2	1
MANDATORY COURSES								
9.	23FYH121	Heritage of Tamils	MC	15 Hours			-	1
10.	23MC101	Soft Skills	MC	15 Hours			-	-
11.	23MC102	Induction Programme	MC	15 Days			-	-
		TOTAL		17	3	4	24	23

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	L	T	P	TOTAL CONTACT PERIODS	CREDITS
THEORY								
1.	23FYM216	Matrices, Fourier Series and Transforms	BSC	3	1	0	4	4
2.	23FYP213	Material Science	BSC	3	0	0	3	3
3.	23FYC212	Organic Chemistry	BSC	3	0	0	3	3
4.	23CH211	Heat Power Engineering	ESC	3	0	0	3	3
5.	23CH212	Electrical Drives and Control	ESC	3	0	0	3	3
6.	23CH213	Introduction to Chemical Engineering	PCC	3	0	0	3	3
PRACTICALS								
7.	23FYH221	English Communication and Competency Laboratory	HSC	0	0	4	4	2
8.	23FPC221	Basic Sciences Laboratory	ESC	0	0	4	4	2
MANDATORY COURSES								
9.	23FYC221	Environmental Science & Engineering	MC	15 Hours			-	1
10.	23FYH222	Tamils and Technology	MC	15 Hours			-	1
11.	23CC	Co-curricular Activities	MC	15 Hours			-	1
		TOTAL		18	1	8	27	26

SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	23M316	Differential Equations and Boundary Value Problems	BSC	3	1	0	4	4
2.	23CH311	Biology for Chemical Engineers	BSC	3	0	0	3	3
3.	23CH312	Fluid Mechanics for Chemical Engineers	PCC	3	0	0	3	3
4.	23CH313	Process Instrumentation	PCC	3	0	0	3	3
5.	23CH314	Chemical Process Industries	PCC	3	0	0	3	3
6.	23CH315	Chemical Process Calculations	PCC	3	1	0	4	3
PRACTICALS								
7.	23CH321	Physical and Organic Chemistry Laboratory	ESC	0	0	3	3	1.5
8.	23CH322	Electrical Drive Laboratory	ESC	0	0	3	3	1.5
MANDATORY COURSES								
9.	23MC301	Induction Programme	MC	15 Hours			-	-
10.	23MC321	Human Values and Professional Ethics	OC	15 Hours			-	1
11.	23MC322	Design Thinking	EEC	15 Hours			-	1
			TOTAL	**18**	**2**	**6**	**26**	**25**

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.		Probability and Statistics	BSC	3	1	0	4	4
2.		Mechanical Operations	PCC	3	0	0	3	3
3.		Heat Transfer	PCC	3	0	0	3	3
4.		Mass Transfer-I	PCC	3	0	0	3	3
5.		Chemical Engineering Thermodynamics	PCC	3	0	0	3	3
6.		Instrumental Methods of Analysis	PCC	3	0	0	3	3
PRACTICALS								
7.		Fluid Mechanics Laboratory	PCC	0	0	3	3	1.5
8.		Technical and Instrumental Analysis Laboratory	PCC	0	0	3	3	1.5
MANDATORY COURSES								
9.		Community Service Engineering	EEC	15 Hours			-	-
10.		Value added Courses-I	MC	15 Hours			-	-
			TOTAL	**18**	**1**	**6**	**25**	**22**

SEMESTER V

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.		Numerical Methods in Chemical Engineering	PCC	3	0	0	3	3
2.		Mass Transfer-II	PCC	3	0	0	3	3
3.		Chemical Reaction Engineering-I	PCC	3	0	0	3	3
4.		Chemical Process Safety	PCC	3	0	0	3	3
5.		Elective-I	PEC	3	0	0	3	3
6.		Elective-II	PEC/ OEC	3	0	0	3	3
PRACTICALS								
7.		Heat Transfer Laboratory	PCC	0	0	3	3	1.5
8.		Mechanical Operations Laboratory	PCC	0	0	3	3	1.5
		INTERNSHIP	EEC	0	0	2	2	1
MANDATORY COURSES								
9.		Seminar and Technical Writing	MC	15 Hours			-	-
10.		Value added Course-II	EEC	15 Hours			-	1
			TOTAL	18	2	6	26	23

SEMESTER VI

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.		Process Dynamics and Control	PCC	3	0	0	3	3
2.		Chemical Reaction Engineering-II	PCC	3	0	0	3	3
3.		Applied Mathematics in Chemical Engineering	PCC	3	0	0	3	3
4.		Biochemical Engineering	PCC	3	0	0	3	3
5.		Elective-III	PCC	3	0	0	3	3
6.		Elective-IV	PEC /OEC	3	0	0	3	3
PRACTICAL								
7.		Mass Transfer Laboratory	PCC	0	0	3	3	1.5
8.		Reaction Engineering Laboratory	PCC	0	0	3	3	1.5
		MINI PROJECT	EEC	0	0	4	4	2
MANDATORY COURSE								
9.		Hackathon	EEC	0	0	2	2	1
			TOTAL	18	0	12	30	24

SEMESTER VII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.		Transport Phenomena	PCC	3	0	0	3	3
2.		Process Economics and Management	PCC	3	0	0	3	3
3.		Process Modeling and Simulation	PCC	3	0	0	3	3
4.		Process Plant Utilities	PCC	3	0	0	3	3
5.		Elective-V	PEC	3	0	0	3	3
6.		Elective-VI	PEC	3	0	0	3	3
PRACTICALS								
		Process Equipment Design and Drawing	PCC	0	0	3	3	1.5
		Process Control and Simulation Laboratory	PCC	0	0	3	3	1.5
			TOTAL	**18**	**0**	**6**	**24**	**21**

SEMESTER VIII

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
		Elective-VII	PEC	3	0	0	3	3
		Elective-VIII	PEC	3	0	0	3	3
PRACTICALS								
		Project Work and Viva-Voce	EEC	0	0	12	12	6
							18	12

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

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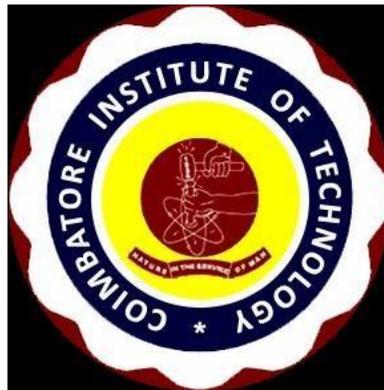
DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

B.TECH. ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Curriculum and Syllabi

(R2021)

Under Choice Based Credit System

(For the students admitted during the academic year 2021 - 2022 and onwards)

SUBJECTS OF STUDY
SEMESTER I

Subject Code	Subject	SCC#	Periods			Credits
			L	T	P	
21FYM14	Matrices and Calculus	BS	3	1	0	4
21FYE11	Technical English	HS	2	0	1	2
21FYP13	Engineering Physics	BS	3	0	0	3
21FYC11	Engineering Chemistry	BS	3	0	0	3
21CS11	C Programming	ES	3	0	0	3
21CSL11	C Programming Laboratory	ES	0	0	4	2
21PL11	Physics Laboratory I	BS	0	0	2	0.5
21CL11	Chemistry Laboratory I	BS	0	0	2	0.5
21MEL12	Engineering Practices Laboratory	BS	0	0	2	1
21FYEL11	Employability Skills	EEC	0	0	2	1
Total Credits						**20**

SEMESTER 8

Subject Code	Subject	SCC[#]	Periods			Credits
			L	T	P	
21FYM21	Linear Algebra and Gradient Calculus	BS	3	1	0	4
21AD21	Fundamentals of Industry Revolution 4.0	PC	3	0	0	3
21FYC21	Environmental Science and Engineering	ES	3	0	0	1
21CS21	Digital Design	ES	3	0	0	3
21CSL22	Python Programming	ES	1	0	4	3
21MEL11	Engineering Graphics	ES	1	0	4	3
21PL21	Physics Laboratory II	BS	0	0	2	0.5
21CL21	Chemistry Laboratory II	BS	0	0	2	0.5
21CSL21	Digital Design Laboratory	ES	0	0	2	1
21FYEL21	English for Employability	EEC	0	0	2	1
21CC01	Co-curricular Activities	-	-	-	-	1
Total Credits						**21**

SEMESTER 9

Subject Code	Subject	SCC#	L	T	P	Credits
			Periods	
21AD31	Probability and Statistics	BS	3	1	0	4
21AD32	Data Structures and Algorithms	PC	3	1	0	4
21AD33	Principles of Artificial Intelligence	PC	3	0	0	3
21AD34	Software Engineering Principles and Practices	PC	3	0	0	3
21AD35	Web Development Technologies	PC	3	0	0	3
21AD36	Science of Creativity and Professional Ethics	HS	1	1	0	1
21ADL37	Data Structures and Algorithms Laboratory	PC	0	0	3	1.5
21ADL38	Web Development Laboratory	PC	0	0	3	1.5
21ADOC01	One Credit Course – Elective I	OCC	-	-	-	1
21HOC01	Communication Skills for Engineers – I	EEC	0	0	2	1
Total Credits						**23**

Subject Code	Subject	SCC#	Periods			Credits
			L	T	P	
21AD41	Discrete Mathematics and Automata Theory	BS	3	1	0	4
21AD42	Machine learning techniques	PC	3	0	0	3
21AD43	Database Management Systems	PC	3	0	0	3
21AD44	Principles of Computer Systems	PC	3	0	0	3
21AD45	Data communication and Networking	PC	3	0	0	3
21AD46	Foundation in Data Science	PC	3	0	0	3
21ADL47	Machine Learning Laboratory	PC	0	0	3	1.5
21ADL48	Database Management Systems Laboratory	PC	0	0	3	1.5
21ADOC02	One Credit Course-Elective II	OCC	-	-	-	1
21HOC02	Communication Skills for Engineers – II	EEC	0	0	2	1
Total Credits						**24**

SEMESTER

Subject Code	Subject	SCC#	Periods			Credits
			L	T	P	
21AD51	Cloud Architecture	PC	3	0	0	3
21AD52	Mobile Application Development	PC	3	0	0	3
21AD53	Data Mining and Analysis	PC	3	0	0	3
21AD54	Big Data Architecture: Tools and Techniques	PC	3	0	0	3
	Professional Elective I	PE	3	0	0	3
	Open Elective I	OE	3	0	0	3
21ADL55	Mobile Application Development Laboratory	PC	0	0	2	1
21ADL56	Data Mining and Analysis Laboratory	PC	0	0	2	1
21ADOC03	Comprehensive Exam Training (One Credit Course)	EEC	-	-	-	1
21AD66	Mini Project (** *Evaluated at Sem VI*)	EEC	0	0	6	-
21ADI57	Internship I * (To be completed during third/fourth semester vacation)	EEC	0	0	0	1
Total Credits						**22**

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SEMESTER 12

Subject Code	Subject	SCC#	Periods			Credits
			L	T	P	
21AD61	Deep Learning Techniques	PC	3	0	0	3
21AD62	Computer Vision and Pattern Recognition	PC	3	0	0	3
21AD63	Data Visualization	PC	3	0	0	3
	Professional Elective II	PE	3	0	0	3
	Open Elective II	OE	3	0	0	3
21ADL64	Deep Learning Laboratory	PC	0	0	4	2
21ADL65	Data Visualization Laboratory	PC	0	0	2	1
21AD66	Mini Project	EEC	0	0	6	3
21ADI67	Internship II* *(To be completed during fourth/fifth semester vacation)*	EEC	0	0	0	1
	Total Credits					**22**

SEMESTER 13

Subject Code	Subject	SCC#	Periods			Credits
			L	T	P	
21AD71	Data Security	PC	3	0	0	3
21AD72	IoT and its Applications	PC	3	0	0	3
21AD73	Applied Natural Language Processing	PC	3	0	0	3
	Professional Elective III	PE	3	0	0	3
	Professional Elective IV	PE	3	0	0	3
21ADL74	Applied Natural Language Processing Laboratory	PC	0	0	2	1
21ADL75	Internet of Things Laboratory	PC	0	0	2	1
21AD76	Project Phase-I	EEC	0	0	6	3
	Total Credits					**20**

Subject Code	Subject	SCC#	Periods			Credits
			L	T	P	
	Professional Elective – V	PE	3	0	0	3
	Professional Elective – VI	PE	3	0	0	3
21AD81	Project Phase-II	EEC	0	0	10	5
	Total Credits					11

Note:
- **Open Electives can be opted from other departments too**
- **NPTEL 12-week courses, CISCO certifications, AWS certifications, PM certifications can be opted instead of electives with approval of department**

TOTAL CREDITS:

Semester I and Semester II : 41

Semester III to Semester VIII : 122

Total   : 163

M. E. STRUCTURAL ENGINEERING

CURRICULA AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	23MSE111	Applied Mathematical methods	FC	3	1	0	4	4
2.	23MSE112	Applied Elasticity and Plasticity	PCC	3	0	0	3	3
3.	23MSE113	Matrix Methods of Structural Analysis	PCC	3	0	0	3	3
4.	23MSE114	Advanced Reinforced Concrete Structures	PCC	3	0	0	3	3
5.		Elective I	PEC	3	0	0	3	3
6.		Department Specific One Credit Course	EEC	2	0	0	2	1
PRACTICALS								
7.	23MSE121	Structural Design studio	PCC	0	0	4	4	2
8.	23MSE122	Research Proposal Writing and IPR	EEC	0	0	4	4	2
			TOTAL	17	1	8	26	21

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	23MSE211	Structural Dynamics	PCC	3	0	0	3	3
2.	23MSE212	Finite Element Method	PCC	3	0	0	3	3
3.	23MSE213	Advanced Steel Structures	PCC	3	0	0	3	3
4.		Elective II	PEC	3	0	0	3	3
5.		Elective III	PEC	3	0	0	3	3
6.		Value Added Course	EEC	2	0	0	2	1
PRACTICALS								
7.	23MSE221	Advanced Structural Engineering Laboratory	PCC	0	0	4	4	2
8.	23MSE222	Finite Element Analysis Laboratory	EEC	0	0	4	4	2
			TOTAL	17	0	8	25	20

SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.		Elective IV	PEC	3	0	0	3	3
2.		Elective V	PEC	3	0	0	3	3
3.		Elective VI/Open Elective	PEC/ OEC	3	0	0	3	3
PRACTICALS								
4.	23MSE331	Practical Training (4 Weeks)	EEC	0	0	0	0	2
5.	23MSE332	Project Work Phase I	EEC	0	0	6	6	3
			TOTAL	9	0	6	15	14

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
PRACTICALS								
1.	23MSE441	Project Work Phase II	EEC	0	0	30	30	15
			TOTAL	0	0	30	30	15

M. E. CONSTRUCTION MANAGEMENT

CURRICULA AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	23MCM111	Statistical Methods and Research methodology for construction management	FCC	3	1	0	4	4
2.	23MCM112	Construction Project Management	PCC	3	0	0	3	3
3.	23MCM113	Construction Project Formulation and Appraisal	PCC	3	0	0	3	3
4.	23MCM114	Construction Economics and Financial Management	PCC	3	0	0	3	3
5.		Program Elective – 1	PEC	3	0	0	3	3
6.		Value added course -1 Green Buildings	EEC	2	0	0	2	1
PRACTICALS								
7.	23MCM121	Data Analysis Laboratory for Construction Management	PCC	0	0	4	4	2
8.	23MCM122	Research proposal writing and IPR	EEC	0	0	4	4	2
			TOTAL	17	1	8	26	21

SEMESTER 5

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	23MCM211	Construction Planning, Scheduling and Control	PCC	3	0	0	3	3
2.	23MCM212	Contract Management and Dispute Resolution	PCC	3	0	0	3	3
3.	23MCM213	Quantitative Techniques in Construction Management	PCC	3	0	0	3	3
4.		Program Elective – 2	PEC	3	0	0	3	3
5.		Program Elective – 3	PEC	3	0	0	3	3
6.		Value added Course – 2	EEC	2	0	0	2	1
PRACTICALS								
7.	23MCM221	Project Planning Laboratory for Construction Management	PCC	0	0	4	4	2
8.	23MCM222	Advanced Construction Engineering and Experimental Techniques Laboratory	PCC	0	0	4	4	2
			TOTAL	17	0	8	25	20

SEMESTER 6

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	L	T	P	TOTAL CONTACT PERIODS	CREDITS
				PERIODS PER WEEK				
THEORY								
1.		Program Elective – 4	PEC	3	0	0	3	3
2.		Program Elective – 5	PEC	3	0	0	3	3
3.		Open Elective / Program Elective - 6	PEC/O EC	3	0	0	3	3
PRACTICALS								
4.	23MCM331	Practical Training	EEC	0	0	0	0	2
5.	23MCM332	Project Work – Phase 1	EEC	0	0	6	6	3
			TOTAL	9	0	6	15	14

SEMESTER 7

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
PRACTICALS								
1.	23MCM441	Project Work – Phase 2	EEC	0	0	30	30	15
			TOTAL	**0**	**0**	**30**	**30**	**15**

M. E. ENVIRONMENTAL ENGINEERING

CURRICULA AND SYLLABI

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	23MEN111	Applied Statistics and Probability	FC	3	1	0	4	4
2.	23MEN112	Environmental Chemistry	PCC	3	0	0	3	3
3.	23MEN113	Environmental Microbiology	PCC	3	0	0	3	3
4.	23MEN114	Physical and Chemical Treatment Systems for Water and Wastewater	PCC	3	0	0	3	3
5.		Elective I	PEC	3	0	0	3	3
6.		Department Specific One Credit Course	EEC	2	0	0	2	1
PRACTICALS								
7.	23MEN221	Environmental and Processes Monitoring Laboratory	PCC	0	0	4	4	2
8.	23MEN222	Environmental Microbiology and Quality Analysis Laboratory	EEC	0	0	4	4	2
			TOTAL	17	1	8	26	21

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	23MEN211	Biological Treatment Process for Wastewater	PCC	3	0	0	3	3
2.	23MEN212	Air and Noise Pollution Control Engineering	PCC	3	0	0	3	3
3.	23MEN213	Industrial Wastewater Pollution-Prevention and Control	PCC	3	0	0	3	3
4.		Elective II	PEC	3	0	0	3	3
5.		Elective III	PEC	3	0	0	3	3
6.		Value Added Course	EEC	2	0	0	2	1
PRACTICALS								
7.	23MEN221	Environmental and Processes Monitoring Laboratory	PCC	0	0	4	4	2
8.	23MEN222	Environmental Microbiology and Quality Analysis Laboratory	EEC	0	0	4	4	2
			TOTAL	17	0	8	25	20

SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.		Elective IV	PEC	3	0	0	3	3
2.		Elective V	PEC	3	0	0	3	3
3.		Elective VI/Open Elective	PEC/ OEC	3	0	0	3	3
PRACTICALS								
4.	23MEN331	Practical Training (4 Weeks)	EEC	0	0	0	0	2
5.	23MEN332	Project Work Phase I	EEC	0	0	6	4	2
			TOTAL	9	0	6	15	14

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
PRACTICALS								
1.	23MEN441	Project Work Phase II	EEC	0	0	30	30	15
			TOTAL	0	0	30	30	15

M.E. – EMBEDDED AND REAL TIME SYSTEMS (ERTS)

SEMESTER I

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23MER111	Higher Engineering Mathematics	BSC	3	1	0	4	4
2	23MER112	System Design & Embedded Controllers	PCC	3	0	0	3	3
3	23MER113	Embedded System Design using FPGA	PCC	3	0	0	3	3
4	23MER114	Electromagnetic Interference and Compatibility	PCC	3	0	0	3	3
5		Elective I	PEC	3	0	0	3	3
PRACTICALS								
6	23MER121	System Design & Embedded controllers Laboratory	PCC	0	0	4	4	2
7	23MER122	Embedded System Design using FPGA Laboratory	PCC	0	0	4	4	2
ONE CREDIT COURSE								
8	OC1	Value added course I	OCC				15	1
			TOTAL	15	1	8	24	21

SEMESTER II

S. NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	23MER211	Automotive Embedded System	PCC	3	1	0	4	4
2	23MER212	Robotics Technology and Intelligence	PCC	3	0	0	3	3
3	23MER231	Real Time Operating Systems	PCC	2	0	2	4	3
4	Elective	Elective II	PEC	3	0	0	3	3
5	Elective	Elective III	PEC	3	0	0	3	3
PRACTICALS								
6	23MER221	Internet of Things Laboratory	PCC	0	0	4	4	2
7	23MER222	Feasibility Report Writing	PCC	0	0	4	4	2
ONE CREDIT COURSE								
8	OC1	Value added course II	OCC				15	1
			TOTAL	16	1	10	25	21

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SEMESTER III

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	Elective	Elective IV	PEC	3	0	0	3	3
2	Elective	Elective V	PEC	3	0	0	3	3
3	Elective	Elective VI	PEC	3	0	0	3	3
PRACTICALS								
4	P1	Project – Phase I	EEC	0	0	6	6	3
ONE CREDIT COURSE								
5	OC1	Value added course III	OCC				15	1
			TOTAL	**9**	**0**	**6**	**15**	**13**

SEMESTER IV

S. NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
PRACTICALS								
1	P2	Project – Phase II	EEC	0	0	30	30	15
			TOTAL	**10**	**0**	**30**	**30**	**15**

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTER APPLICATIONS

MCA 2 YEARS PROGRAMME 2020

Curriculum from the Academic Year 2020 and onwards

Under Choice Based Credit System

Name of the degree   :   MCA

Specialization   :   Computer Applications

Semester I

Course Code	Course Name	L	T	P	C	CY
20MCA11	Mathematical Foundations of Computer Applications	3	0	0	3	FC
20MCA12	Data Structures and Algorithms	3	0	0	3	FC
20MCA13	Database Management Systems	3	0	0	3	FC
20MCA14	Operating System Principles	3	0	0	3	FC
20MCA15	Software Engineering	3	0	0	3	FC
20MCA16	Data Structures Laboratory	0	0	4	2	FC
20MCA17	Database Management Systems Laboratory	0	0	4	2	FC
20MCA18	Python Programming Laboratory	0	0	4	2	PC
20MCA19	Communication Skills	0	0	2	1	EEC
	Total Credits				22	

Semester II

Course Code	Course Name	L	T	P	C	CY
20MCA21	Artificial Intelligence	3	0	0	3	FC
20MCA22	Advanced Java Programming	3	0	0	3	PC
20MCA23	Virtualization and Cloud Computing	3	0	0	3	FC
20MCA24	SOA and Web Services	3	0	0	3	FC
	Elective I	3	0	0	3	PE
20MCA25	Artificial Intelligence Laboratory	0	0	4	2	FC
20MCA26	Advanced Programming Laboratory	0	0	4	2	PC
20MCA27	Professional English	0	0	2	1	EEC
20MCA28	Mini Project	0	0	2	1	EEC
20HAC01	Hackathon	0	0	0	1	EEC
	One Credit Course	1	0	0	1	OC
	Total Credits				23	

Semester III

Course Code	Course Name	L	T	P	C	CY
20MCA31	Cryptography and Network Security	3	0	0	3	FC
20MCA32	Machine Learning	3	0	0	3	FC
	Elective II	3	0	0	3	PE
	Elective III	3	0	0	3	PE
	Elective IV (Management Elective)	3	0	0	3	PE
20MCA33	Cryptography and Network Security Laboratory	0	0	4	2	FC
20MCA34	Machine Learning Laboratory	0	0	4	2	FC
	Elective Lab	0	0	4	2	PE
20MCAIT01	Inplant Training	0	0	0	1	EEC
	Total Credits				22	

Semester IV

Course Code	Course Name	L	T	P	C	CY
20MCA41	Project work and viva voce	-	-	-	13	EEC
	Total Credits				13	
	Total Credits				**80**	

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF MANAGEMENT STUDIES (MBA)

MASTER OF BUSINESS ADMINISTRATION REGULATIONS - 2021

CHOICE BASED CREDIT SYSTEM

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs) :

MBA programme curriculum is designed to prepare the post graduate students

I. To have a thorough understanding of the core aspects of the business.

II. To provide the learners with the management tools to identify, analyze and create business opportunities as well as solve business problems.

III. To prepare them to have a holistic approach towards management functions.

IV. To motivate them for continuous learning.

V. To inspire and make them practice ethical standards in business.

PROGRAMME OUTCOMES (POs) :

On successful completion of the programme,

1. Ability to apply the business acumen gained in practice.

2. Ability to understand and solve managerial issues.

3. Ability to communicate and negotiate effectively, to achieve organizational and individual goals.

4. Ability to upgrade their professional and managerial skills in their workplace.

5. Ability to explore and reflect about managerial challenges, develop informed managerial decisions in a dynamically unstable environment.

6. Ability to take up challenging assignments.

7. Ability to understand one's own ability to set achievable targets and complete them.

8. Ability to pursue life long learning.

9. To have a fulfilling business career.

10. Ability to have financial literacy.

11. Ability to fulfill social out reach

12. Ability to understand business analytics

MAPPING OF PEOS WITH POS :

Programme Educational Objectives	Programme Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	3	3	2	1	3	3	1	2	1	1	1	3
II	1	3	1	2	3	1	3	2	1	3	1	3
III	3	3	2	3	3	2	3	3	3	1	2	3
IV	2	1	2	3	3	1	3	3	3	1	2	1
V	1	3	3	2	2	3	1	2	3	1	3	1

Year	Sem.	COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
YEAR 1	SEM 1	Statistics for Management		-							
		Management Concepts and Organizational Behavior	-		-	-					
		Managerial Economics	-				-	-			
		Accounting for Decision Making		-							
		Legal Aspects of Business	-	-	-						
		Information Management	-		-	-				-	-
		Marketing Management	-			-					-
		Indian Ethos and Business Ethics Seminar					-	-			-
		Business Communication (Laboratory)				-	-			-	-
	SEM 2	Quantitative Techniques for Decision Making		-		-					
		Financial Management		-		-		-			-
		Human Resource Management	-		-	-		-		-	-
		Operations Management	-	-		-			-		
		Business Research Methods		-		-			-		
		Business Analytics		-		-					-
		Non-Functional Elective									
		Data Analysis and Business Modelling (Laboratory)		-				-	-		-
		Rural Community Engagement	-		-		-			-	-
YEAR 2	SEM 3	Strategic Management	-		-	-		-		-	-
		International Business	-		-		-				-
		Creativity and Innovation Laboratory	-	-		-		-			-
		Elective I									
		Elective II									
		Elective III									
		Elective IV									
		Elective V									
		Elective VI									
		Summer Internship	-	-	-	-	-	-	-	-	-
	SEM 4	Project work - 16 weeks Project Work + Maximum 4 weeks for report writing	-	-	-	-	-	-	-	-	-

NON - FUNCTIONAL ELECTIVES

Sl. No.	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
1.	Entrepreneurship Development	-			-					
2.	Corporate Governance	-		-	-				-	
3.	Event Management				-				-	
4.	Micro and Small Business Management	-			-				-	
5.	Fuzzy logic for Management Decision Making		-			-	-	-		
6.	Intellectual Property Rights				-				-	
7.	Sustainable Management	-		-	-				-	

STREAM / SPECIALIZATION : FINANCIAL MANAGEMENT

Sl. No.	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
1.	Security Analysis and Portfolio Management						-		-	-
2.	Financial markets						-		-	
3.	Banking and Financial Services						-		-	
4.	Financial Derivatives						-		-	
5.	Financial Modelling			-			-	-	-	-
6.	Business Analysis and Valuation			-	-		-	-	-	
7.	International Finance						-		-	
8.	Behavioral Finance	-					-		-	-
9.	Fintech and Blockchain Applications in Finance			-			-	-	-	-

STREAM / SPECIALIZATION : OPERATIONS MANAGEMENT

Sl. No.	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
10.	Supply Chain Management		-		-	-				-
11.	Quality Management	-			-				-	-
12.	Materials Management				-					
13.	Services Operations Management	-	-	-	-	-				-
14.	Process Management	-	-		-					
15.	Supply Chain Analytics		-		-	-	-	-	-	
16.	Project Management	-	-		-					-
17.	Product design				-					-
18.	Lean Six Sigma		-		-	-	-		-	
19.	Robust Design	-			-				-	-

STREAM / SPECIALIZATION : MARKETING MANAGEMENT

Sl. No.	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
20.	Retail Marketing				-					-
21.	Consumer Behavior	-		-	-				-	-
22.	Integrated Marketing Communications				-	-				
23.	Services Marketing	-		-	-					-
24.	Sales and Distribution Management				-					-
25.	Product and Brand Management				-					
26.	Digital Marketing		-		-	-	-	-		
27.	International Marketing	-			-		-			-
28.	Marketing Analytics		-		-	-	-	-	-	
29.	B2B & B2C Sales & Marketing									

STREAM / SPECIALIZATION : HUMAN RESOURCE MANAGEMENT

Sl. No.	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
30.	Strategic Human Resource Management	-			-		-		-	-
31.	Industrial Relations and Labour Legislations	-			-					-
32.	Social Psychology	-		-	-	-			-	
33.	Organizational, Design, Change and Development				-		-			-
34.	Managerial Behavior and Effectiveness	-		-	-	-			-	-
35.	Negotiation and Conflict Management	-		-	-	-				-
36.	Reward and Compensation Management				-	-			-	
37.	Personal Effectiveness	-		-	-	-		-	-	-
38.	International Human Resources Management				-		-		-	
39.	Human Resource Analytics		-		-		-	-		
40.	Talent Acquisition and Management									

STREAM / SPECIALIZATION : SYSTEMS MANAGEMENT

Sl. No.	Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
41.	e-business			-	-				-	-
42.	Internet of Things				-		-		-	-
43.	Cloud computing				-	-				
44.	Enterprise Resource Planning	-			-				-	-
45.	Software Project and quality management				-	-				
46.	Data Mining for Business Intelligence		-		-				-	-
47.	Big Data Analytics		-		-	-	-	-		
48.	Deep Learning & Artificial Intelligence			-	-	-	-	-	-	
49.	R Programming		-			-	-	-		
50.	Python Programming		-			-	-	-		

STREAM / SPECIALIZATION : BUSINESS ANALYTICS

Sl. No.	Subject	Programme Outcomes								
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
51.	Block Chain Technology				-	-	-			
52.	Social media web Analytics		-		-	-	-	-		-
53.	Stochastic Modelling		-			-	-	-		
54.	Time Series Analysis		-			-	-	-		
55.	Multivariate data analysis		-			-	-	-		
56.	Data Mining for Business Intelligence		-		-				-	-
57.	Big Data Analytics		-		-	-	-	-		
58.	Deep Learning & Artificial Intelligence			-	-	-	-	-	-	
59.	R Programming		-			-	-	-		
60.	Python Programming		-			-	-	-		
61.	Logistics & Supply Chain Management									

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF MANAGEMENT STUDIES (MBA)

REGULATIONS - 2021 ONWARDS

FOR THE STUDENTS ADMITTED DURING 2021 - 22 AND ONWARDS

CHOICE BASED CREDIT SYSTEM

MASTER OF BUSINESS ADMINISTRATION (FULL - TIME)

CURRICULUM AND SYLLABI FOR I TO IV SEMESTERS

SEMESTER I

SI No.	Course Code	Course Title	Category	Periods per week			Total contact periods	Credits
				L	T	P		
		THEORY						
1.	21MBA11	Statistics for Management	PCC	3	0	0	3	3
2.	21MBA12	Management Concepts and Organizational Behavior	PCC	3	0	0	3	3
3.	21MBA13	Managerial Economics	PCC	3	0	0	3	3
4.	21MBA14	Accounting for Decision Making	PCC	3	0	0	3	3
5.	21MBA15	Legal Aspects of Business	PCC	3	0	0	3	3
6.	21MBA16	Information Management	PCC	3	0	0	3	3
7.	21MBA17	Marketing Management	PCC	3	0	0	3	3
		PRACTICALS						
8.	21MBAL18	Indian Ethos and Business Ethics (Seminar)	EEC	0	0	4	4	2
9.	21MBAL19	Business Communications (Laboratory)	EEC	0	0	4	4	2
		TOTAL CREDITS						**25**

SEMESTER II

SI No.	Course Code	Course Title	Category	L	T	P	Total contact periods	Credits
		THEORY						
1.	21MBA21	Quantitative Techniques for Decision Making	PCC	3	0	0	3	3
2.	21MBA22	Financial Management	PCC	3	0	0	3	3
3.	21MBA23	Human Resource Management	PCC	3	0	0	3	3
4.	21MBA24	Operations Management	PCC	3	0	0	3	3
5.	21MBA25	Business Research Methods	PCC	3	0	0	3	3
6.	21MBA26	Business Analytics	PCC	3	0	0	3	3
7.		Non-Functional Elective	PEC	3	0	0	3	3
		PRACTICALS						
8.	21MBAL27	Data analysis and Business Modeling (Laboratory)	PCC	0	0	4	4	2
9.	21MBAL28	Rural Community Engagement	EEC	0	0	4	4	2
		TOTAL CREDITS						**25**

NOTE : In the second semester Students need to choose one elective from the Non-Functional stream

Summer internship - minimum of 4 weeks of internship Training Report has to be submitted

SEMESTER III

SI No.	Course Code	Course Title	Category	L	T	P	Total contact periods	Credits
		THEORY						
1.	21MBA31	Strategic Management	PCC	3	0	0	3	3
2.	21MBA32	International Business	PCC	3	0	0	3	3
3.		Elective I	PEC	3	0	0	3	3
4.		Elective II	PEC	3	0	0	3	3
5.		Elective III	PEC	3	0	0	3	3
6.		Elective IV	PEC	3	0	0	3	3
7.		Elective V	PEC	3	0	0	3	3
8.		Elective VI	PEC	3	0	0	3	3
		PRACTICALS						
9.	21MBAL33	Creativity and Innovation Laboratory	EEC	0	0	4	4	2
10.	21MBAL34	Summer Internship	EEC	0	0	4	4	2
		TOTAL CREDITS						**28**

NOTE : In the third semester Students need to choose -Three electives from 2 functional streams for Dual Specialization

SEMESTER IV

SI No.	Course Code	Course Title	Category	Periods per week			Total contact periods	Credits
				L	T	P		
		THEORY						
1.	21MBA41	Project Work	EEC	0	0	24	24	12
		TOTAL CREDITS						**12**

GRAND TOTAL NO. OF CREDITS : 90

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University)

DEPARTMENT OF CIVIL ENGINEERING

B.E. CIVIL ENGINEERING-FULL TIME

(III TO VIII SEMESTER)

Curriculum from the Academic Year 2019 - 2020 and onwards

SUBJECTS OF STUDY

Semester III

Course Code	Course Name	L	T	P	C	Category
19CEM31	Differential Equations and Boundary Value Problems	3	1	0	4	BSC
19CE31	Mechanics of Solids	3	1	0	4	ES
19CE32	Engineering Geology	3	0	0	3	PC
19CE33	Mechanics of Fluids	3	0	0	3	PC
19CE34	Surveying	3	0	0	3	PC
19CE35	Water Supply Engineering	3	0	0	3	PC
19HSS01	Science of Creativity and Professional Ethics	1	0	0	1	HSC
19CEL36	Strength of Materials Laboratory	0	0	2	1	PC
19CEL37	Survey Laboratory	0	0	2	1	PC
	One Credit Course	1	0	0	1	EEC
19HOC31	**Communication Skills for Engineers I***	**0**	**0**	**2**	**1**	**EEC**
	TOTAL CREDITS				**25**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
19CE41	Construction Technology	3	0	0	3	PC
19CE42	Strength of Materials	3	1	0	4	PC
19CE43	Transportation Engineering	3	0	0	3	PC
19CE44	Applied Hydraulics and Hydraulic Machinery	3	0	0	3	PC
19CE45	Waste Water Engineering	3	0	0	3	PC
19CE46	Professional Practices and Ethics	3	0	0	3	BSC
19CEL47	Hydraulics Laboratory	0	0	2	1	PC
19CEL48	Environmental Engineering Laboratory	0	0	2	1	PC
	One Credit Course	1	0	0	1	EEC
19HOC41	**Communication Skills for Engineers II***	**0**	**0**	**2**	**1**	**EEC**
	TOTAL CREDITS				**23**	
	* Not to be counted for GPA. Pass is required					

Semester V

Course Code	Course Name	L	T	P	C	Category
19CE51	Structural Analysis - I	3	0	0	3	PC
19CE52	Design of Reinforced Concrete Structural Elements	3	0	0	3	PC
19CE53	Mechanics of Soils	3	0	0	3	PC
19CE54	Concrete Technology	3	0	0	3	PC
	Elective- I	3	0	0	3	EC
	Elective - II	3	0	0	3	EC
19CEL55	Computer Aided Civil Engineering Drawing	0	0	2	1	ES
19CEL56	Highway Engineering Laboratory	0	0	2	1	PC
	One Credit Course	1	0	0	1	EEC
	Mini Project	-	-	-	-	EEC
19INT51	Internship*	0	0	2	1	EEC
19HOC51	**Employability and Personality Development Skills I #**	**0**	**0**	**2**	**1**	**EEC**
	TOTAL CREDITS				**23**	

*2 weeks of Internship to be completed during 4th semester vacation

Semester VI

Course Code	Course Name	L	T	P	C	Category
19CE61	Structural Analysis - II	3	0	0	3	PC
19CE62	Design of Steel Structures	3	0	0	3	PC
19CE63	Foundation Engineering	3	0	0	3	PC
	Elective- III	3	0	0	3	EC
	Elective- IV	3	0	0	3	EC
19CEL64	Soil Mechanics Laboratory	0	0	2	1	PC
19CEL65	Quantity Surveying and Project Planning Laboratory	0	0	2	1	PC
	One Credit Course	1	0	0	1	EEC
19CE66	Mini Project	0	0	6	3	EEC
19INT61	Internship*	0	0	2	1	EEC
19HOC61	**Employability and Personality Development Skills II #**	**0**	**0**	**2**	**1**	**EEC**
	TOTAL CREDITS				**23**	

*2 weeks of Internship to be completed during 5th semester vacation

Not to be counted for GPA. Pass is required

Semester VII

Course Code	Course Name	L	T	P	C	Category
19CE71	Irrigation Engineering	3	0	0	3	PC
19CE72	Earthquake Resistant Design of Structures	3	0	0	3	PC
19CE73	Construction Management	3	0	0	3	PC
	Elective- V	3	0	0	3	EC
	Elective- VI	3	0	0	3	EC
19CEL74	Computer Applications Laboratory	0	0	2	1	PC
19CEL75	Concrete Laboratory	0	0	2	1	PC
19CE76	Project Work Phase I	0	0	6	3	EEC
	TOTAL CREDITS				**20**	

Semester VIII

Course Code	Course Name	L	T	P	C	Category
	Elective- VII	3	0	0	3	EC
	Elective-VIII	3	0	0	3	EC
19CE81	Project Work Phase II	0	0	10	5	EEC
	TOTAL CREDITS				**11**	

* Including first year credits   **TOTAL CREDITS = 164***

BSC   -   Basic Sciences

HSC   -   Humanities and Social Sciences

ES   -   Engineering Sciences

PC   -   Professional Core

PE   -   Professional Elective

OE   -   Open Elective

EEC   -   Employability Enhancement Course

EC   -   Elective Course - PE / OE

LIST OF ELECTIVES

PROFESSIONAL ELECTIVES

1. STRUCTURAL ENGINEERING

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19CEE01	Design of Concrete Structures	3	0	0	3	PE
2	19CEE02	Advanced Concrete Structures	3	0	0	3	PE
3	19CEE03	Prestressed Concrete Structures	3	0	0	3	PE
4	19CEE04	Design of Bridges	3	0	0	3	PE
5	19CEE05	Advanced Steel Structures	3	0	0	3	PE
6	19CEE06	Advanced Structural Analysis	3	0	0	3	PE
7	19CEE07	Prefabricated Structures	3	0	0	3	PE
8	19CEE08	Advanced Surveying	3	0	0	3	PE
9	19CEE09	Numerical Methods for Civil Engineering	3	0	0	3	PE
10	19CEE10	Finite Element Method	3	0	0	3	PE
11	19CEE11	Industrial Structures	3	0	0	3	PE
12	19CEE12	Smart Materials and Structures	3	0	0	3	PE
13	19CEE13	Safety in Civil Engineering Practice	3	0	0	3	PE
14	19CEE14	Remote Sensing and GIS	3	0	0	3	PE
15	19CEE15	Ground Improvement Techniques	3	0	0	3	PE
16	19CEE16	Design of Deep Foundation	3	0	0	3	PE
17	19CEE17	Earthquake Resistant Design of Masonry and Timber Structures	3	0	0	3	PE
18	19CEE18	Building Services and Maintenence Engineering	3	0	0	3	PE
19	19CEE19	Optimization Techniques in Civil Engineering	3	0	0	3	PE
20	19CEE20	Theory of Architecture	3	0	0	3	PE
21	19CEE21	Green Building Concepts and Practices	3	0	0	3	PE

2. ENVIRONMENTAL ENGINEERING

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19CEE22	Design of Environmental Structures and Drawing	3	0	0	3	PE
2	19CEE23	Air Pollution and Control	3	0	0	3	PE
3	19CEE24	Solid and Hazardous Waste Management	3	0	0	3	PE
4	19CEE25	Environmental Impact Assessment	3	0	0	3	PE
5	19CEE26	Industrial Waste Water Management	3	0	0	3	PE
6	19CEE27	Geo Environmental Engineering	3	0	0	3	PE

3. TRANSPORTATION ENGINEERING

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19CEE28	Pavement Engineering	3	0	0	3	PE
2	19CEE29	Airport and Harbour Engineering	3	0	0	3	PE
3	19CEE30	Traffic Engineering	3	0	0	3	PE
4	19CEE31	Urban Transportation Planning	3	0	0	3	PE
5	19CEE32	Intelligent Transport System	3	0	0	3	PE

4. HYDRAULICS

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19CEE33	Hydraulic Structures	3	0	0	3	PE
2	19CEE34	Engineering Hydrology	3	0	0	3	PE

5. CONSTRUCTION ENGINEERING AND MANAGEMENT

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19CEE35	Valuation of Immovable Properties	3	0	0	3	PE
2	19CEE36	Engineering Economics	3	0	0	3	PE
3	19CEE37	Maintenance and Rehabilitation of Structures	3	0	0	3	PE
4	19CEE38	Advanced Construction Technology	3	0	0	3	PE
5	19CEE39	Contract Management	3	0	0	3	PE
6	19CEE40	Construction Equipments and Techniques	3	0	0	3	PE
7	19CEE41	Formwork for Concrete Structures	3	0	0	3	PE
8	19CEE42	Entrepreneurship in Civil Engineering	3	0	0	3	PE

ONE CREDIT COURSES*

A) INDUSTRY BASED ONE CREDIT COURSES

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19CEOC01	Building Construction Process- An Overview	1	0	0	1	OC
2	19CEOC02	Applications of IOT in Civil Engineering	1	0	0	1	OC
3	19CEOC03	Certification and Career Roadmap in Civil Engineering	1	0	0	1	OC
4	19CEOC04	Environmental Monitoring	1	0	0	1	OC
5	19CEOC05	Python for Civil Engineers	1	0	0	1	OC
6	19CEOC06	3D Printing of Civil Engineering Structures	1	0	0	1	OC

B) DEPARTMENT BASED ONE CREDIT COURSES

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19CEOC07	Alternative Building Materials from Waste	1	0	0	1	OC
2	19CEOC08	Structural Drawing	0	0	2	1	OC
3	19CEOC09	Sustainability in Construction	1	0	0	1	OC
4	19CEOC10	Introduction to Image Processing and GIS	0	0	2	1	OC

C) NPTEL ONLINE COURSES

* One credit courses could be opted from Department / Industry / NPTEL

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University)

DEPARTMENT OF MECHANICAL ENGINEERING

BACHELOR OF MECHANICAL ENGINEERING

CHOICE BASED CREDIT SYSTEM

Curriculum from the Academic Year 2019 - 2020 and onwards

SUBJECTS OF STUDY

Semester III

Course Code	Course Name	L	T	P	C	Category
19MEM31	Ordinary and Partial Differential Equations	3	1	0	4	BSC
19ME31	Engineering Thermodynamics	3	1	0	4	PCC
19ME32	Engineering Mechanics for Mechanical Engineers	3	1	0	4	PCC
19ME33	Fluid Mechanics and Machinery	3	0	0	3	PCC
19ME34	Embedded Processor Architecture and Programming	3	0	0	3	ESC
19HSS01	Science of Creativity and Professional Ethics	1	1	0	1	HS
19MEL35	Computer Aided Machine Drawing - I	0	0	2	1	PCC
19MEL36A / 19MEL36B	Fluid Mechanics & Machinery Laboratory / Electrical Machines & Drives and Embedded Systems Laboratory	0	0	2	0.5	PCC
	One Credit Course - Elective I	1	0	0	1	EEC
19HOC31	Communication Skills for Engineers - I*	0	0	2	1	EEC
	TOTAL CREDITS				**22.5**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
19ME41	Applied Thermodynamics	3	1	0	4	PCC
19ME42	Strength of Materials	3	1	0	4	PCC
19ME43	Mechanics of Machines	3	1	0	4	PCC
19ME44	Materials Engineering	3	0	0	3	PCC
19ME45	Manufacturing Processes - I	3	0	0	3	PCC
19MEL46	Computer Aided Machine Drawing - II	0	0	2	1	PCC
19MEL36A / 19MEL36B	Fluid Mechanics & Machinery Laboratory / Electrical Machines & Drives and Embedded Systems Laboratory	0	0	2	0.5	PCC

19MEL47A / 19MEL47B	Material Characterization and Testing Laboratory / Manufacturing Processes Laboratory	0	0	2	0.5	PCC
	One Credit Course - Elective II	1	0	0	1	EEC
19HOC41	Communication Skills for Engineers - II*	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

* Not to be counted for GPA. Pass is required.

Semester V

Course Code	Course Name	L	T	P	C	Category
19ME51	Heat and Mass Transfer	3	1	0	4	PCC
19ME52	Design of Machine Elements	3	1	0	4	PCC
19ME53	Manufacturing Processes - II	3	0	0	3	PCC
19ME54	Metrology and Quality Control	3	0	0	3	PCC
19ME55	Operations Research	3	1	0	4	HS
	Elective 1	3	0	0	3	PEC
19MEL47A / 19MEL47B	Material Characterization and Testing Laboratory / Manufacturing Processes Laboratory	0	0	2	0.5	PCC
19MEL56A / 19MEL56B	Applied Thermal Sciences Laboratory / Dynamics and Metrology Laboratory	0	0	2	0.5	PCC
	One Credit Course - Elective III	1	0	0	1	EEC
19INT51	Internship - I	0	0	0	1	EEC
19ME67	Mini Project	0	0	3	0	EEC
19HOC51	Employability and Personality Development Skills - I*	0	0	2	1	
	TOTAL CREDITS				**25**	

Semester VI

Course Code	Course Name	L	T	P	C	Category
19ME61	Refrigeration and Air-conditioning	3	0	0	3	PCC
19ME62	Finite Element Analysis	3	1	0	4	PCC
19ME63	Design of Transmission Systems	3	1	0	4	PCC
19ME64	Computer Aided Engineering	3	1	0	4	PCC
	Elective 2	3	0	0	3	PEC
19MEL56A / 19MEL56B	Applied Thermal Sciences Laboratory / Dynamics and Metrology Laboratory	0	0	2	0.5	PCC
19MEL65	CAD / CAM Laboratory	0	0	2	1	PCC
	One Credit Course - Elective IV	1	0	0	1	PCC
19INT61	Internship - II	0	0	0	1	EEC
19ME67	Mini Project	0	0	3	3	EEC
19HOC61	Employability and Personality Development Skills - II*	0	0	2	1	
	TOTAL CREDITS				**25.5**	

* Not to be counted for GPA. Pass is required.

Semester VII

Course Code	Course Name	L	T	P	C	Category
19ME71	Control Theory and Mechatronics	2	0	2	3	PCC
19ME72	Quality Engineering and Management	3	0	0	3	PCC
	Elective 3	3	0	0	3	PEC
	Elective 4	3	0	0	3	PEC
	Elective 5	3	0	0	3	OEC
	Elective 6	3	0	0	3	OEC
19ME73	Project Work Phase - I	0	0	6	3	EEC
	TOTAL CREDITS				**21**	

Semester VIII

Course Code	Course Name	L	T	P	C	Category
	Elective 7	3	0	0	3	PEC
	Elective 8	3	0	0	3	PEC
19ME81	Project Work Phase - II	0	0	10	5	EEC
	TOTAL CREDITS				**11**	

Semester 1	20
Semester 2	19
Semester 3	22.5
Semester 4	22
Semester 5	25
Semester 6	25.5
Semester 7	21
Semester 8	11
Total Credits	**166**

ONE CREDIT COURSES (ELECTIVES) OFFERED

Course Code	Course Name	Category	L	T	P	C
19MEOC01	MATLAB Programming*	OC	1	0	0	1
19MEOC02	Non-Destructive Evaluation	OC	1	0	0	1
19MEOC03	Advanced Industrial Automation Systems*	OC	1	0	0	1
19MEOC04	Recent Trends in Quality	OC	1	0	0	1
19MEOC05	Foundry Practice and Procedures	OC	1	0	0	1
19MEOC06	Basics of Automotive Electrical Systems*	OC	1	0	0	1
19MEOC07	Design Thinking - A Primer	OC	1	0	0	1
19MEOC08	Aircraft Maintenance*	OC	1	0	0	1
19MEOC09	Inspection and Quality Control in Manufacturing*	OC	1	0	0	1
19MEOC10	Constitution of India	OC	1	0	0	1
19MEOC11	Biology for Engineers	OC	1	0	0	1
19MEOC12	Human Values	OC	1	0	0	1
19MEOC13	E-Commerce Security*	OC	1	0	0	1
19MEOC14	Innovation and Entrepreneurship	OC	1	0	0	1
19MEOC15	3-D Scanning Technology	OC	1	0	0	1

* Employability enhancement courses

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

B.E. ELECTRONICS AND COMMUNICATION ENGINEERING

CHOICE BASED CREDIT SYSTEM

Curriculum from the academic year 2019-2020 onwards

SUBJECTS OF STUDY

Semester III

Course Code	Course Name	L	T	P	C	Category
19ECM31	Matrices, Linear Algebra and Numerical Methods	3	1	0	4	BSC
19EC31	Digital Electronics	3	1	0	4	PCC
19EC32	Analog Electronics	3	0	0	3	PCC
19EC33	Signals and Systems	3	1	0	4	PCC
19EC34	Computer Architecture and Organization	3	0	0	3	PCC
19HSS01	Science of Creativity and Professional Ethics	1	0	0	1	HSC
19ECL35	Digital Electronics Laboratory	0	0	2	1	PCC
19ECL36	Analog Electronics Laboratory	0	0	2	1	PCC
	One Credit Course - Elective I				1	EEC
19HOC31	Communication Skills for Engineers - I*	0	0	2	1	EEC
	TOTAL CREDITS				**23**	

*Pass is required not accounted for GPA

Semester IV

Course Code	Course Name	L	T	P	C	Category
19EC41	Probability and Stochastic Process	3	1	0	4	PCC
19EC42	Principles of Communication	3	1	0	4	PCC
19EC43	Microcontroller Based Systems	3	1	0	4	PCC
19EC44	Linear Integrated Circuits	3	0	0	3	PCC
19EC45	Electromagnetic Fields and Waveguides	3	0	0	3	PCC
19ECL46	Microcontrollers Laboratory	0	0	2	1	PCC
19ECL47	Linear Integrated Circuits Laboratory	0	0	2	1	PCC
	One Credit Course - Elective II				1	EEC
19HOC41	Communication Skills for Engineers -II*	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

*Pass is required not accounted for GPA

Semester V

Course Code	Course Name	L	T	P	C	Category
19EC51	Control Systems	3	0	0	3	PCC
19EC52	Digital Signal Processing	3	0	0	3	PCC
19EC53	Embedded Systems and IoT	3	0	0	3	PCC
19EC54	Antennas and Wave Propagation	3	0	0	3	PCC
	Elective - I	3	0	0	3	PEC
	Elective - II	3	0	0	3	PEC/OEC
19ECL55	Signal Processing Laboratory	0	0	2	1	PCC
19ECL56	Embedded Systems and IoT Laboratory	0	0	2	1	PCC
	One Credit Course - Elective III	0	0	2	1	EEC
19EC66	Mini Project				-	EEC
19INT51	Internship - I*				1	EEC
19HOC51	Employability and Personality Development Skills- I**	0	0	2	1	EEC
	TOTAL CREDITS				**23**	

* Internship / Project to be completed during 4th semester vacation

** Pass is required not accounted for GPA

Semester VI

Course Code	Course Name	L	T	P	C	Category
19EC61	VLSI Design	4	0	0	4	PCC
19EC62	Digital Communication	3	0	0	3	PCC
19EC63	Data Communication Networks	3	0	0	3	PCC
	Elective - III	3	0	0	3	PEC
	Elective - IV	3	0	0	3	PEC/OEC
19ECL64	VLSI Design Laboratory	0	0	2	1	PCC
19ECL65	Analog and Digital Communication Laboratory	0	0	2	1	PCC
	One Credit Course - Elective IV	1	0	0	1	EEC
19EC66	Mini Project	0	0	6	3	EEC
19INT61	Internship - II*				1	EEC
19HOC61	Employability And Personality Development Skills - II**	0	0	2	1	EEC
	TOTAL CREDITS				**24**	

* Internship to be completed during 5th semester vacation

** Pass is required not accounted for GPA

Semester VII

Course Code	Course Name	L	T	P	C	Category
19EC71	Digital Image Processing	4	0	0	4	PCC
19EC72	Microwave Engineering and Optical Communication	4	0	0	4	PCC
19EC73	Wireless Communication and Networks	3	0	0	3	PCC
	Elective - V	3	0	0	3	PEC
	Elective - VI	3	0	0	3	PEC
19ECL74	Wireless Communication and Networking Laboratory	0	0	2	1	PCC
19ECL75	High Frequency Laboratory	0	0	2	1	PCC
19EC76	Project Phase I	0	0	6	3	EEC
	TOTAL CREDITS				22	

SEMESTER VIII

Course Code	Course Name	L	T	P	C	Category
	Elective -VII	3	0	0	3	PEC
	Elective -VIII	3	0	0	3	PEC
19EC81	Project Phase II	0	0	10	5	EEC
	TOTAL CREDITS				11	

TOTAL CREDITS : 165 (4 year B.E ECE)

TOTAL CREDITS : 129* (Lateral-B.E ECE)

*125 credits-from 3rd to 8th semester,

   4 credits-Bridge Courses (Engineering Mathematics-2 Credits & Physical Sciences -2 Credits)

Category; BSC - Basic Sciences Course, HSC- Humanities and Social Sciences Course, ESC-Engineering Sciences Course, PCC -Professional Core Course, PEC- Professional Elective Course, OEC-Open Elective Course, EEC -Employability Enhancement Course

LIST OF PROFESSIONAL ELECTIVES

COMMUNICATION & SIGNAL PROCESSING

S. No.	Course Code	Course Name	L	T	P	C
1	19ECE01	Multimedia Compression and Communication	3	0	0	3
2	19ECE02	Digital Switching and Transmission	3	0	0	3
3	19ECE03	Introduction to Machine Learning	3	0	0	3
4	19ECE04	Signal Processing Using Python	3	0	0	3
5	19ECE05	Advanced Digital Signal Processing	3	0	0	3
6	19ECE06	Speech Signal Processing	3	0	0	3
7	19ECE07	Wearable Systems	3	0	0	3
8	19ECE08	Adaptive Signal Processing	3	0	0	3
9	19ECE09	Information Theory and Coding	3	0	0	3
10	19ECE10	Communication System Design	3	0	0	3
11	19ECE11	Overview of Industry 4.0	3	0	0	3
12	19ECE12	Cryptography and Network Security	3	0	0	3
13	19ECE13	Parallel and Distributed Processing	3	0	0	3
14	19ECE14	Optical Communication Networks	3	0	0	3
15	19ECE15	Soft Computing and Applications	3	0	0	3
16	19ECE16	Cognitive Radio Communication Systems	3	0	0	3
17	19ECE17	Next Generation Networks	3	0	0	3
18	19ECE18	Wireless Adhoc and Sensor Networks	3	0	0	3
19	19ECE19	Wireless Networks and Standards	3	0	0	3
20	19ECE20	5G Networks	3	0	0	3
21	19ECE21	Network Routing and Infrastructure Management	3	0	0	3
22	19ECE22	Radar and Navigational Aids	3	0	0	3
23	19ECE23	Satellite Communication	3	0	0	3

EMBEDDED SYSTEMS

S. No.	Course Code	Course Name	L	T	P	C
1	19ECE24	Data Structures and Algorithms	3	0	0	3
2	19ECE25	Operating Systems	3	0	0	3
3	19ECE26	Real Time Applications Using Python	3	0	0	3
4	19ECE27	Design Fundamentals of Electric and Hybrid Vehicles	3	0	0	3
5	19ECE28	Automotive Electronics	3	0	0	3
6	19ECE29	Advanced Processor Architectures	3	0	0	3
7	19ECE30	IoT Based System Design	3	0	0	3
8	19ECE31	Real Time Operating Systems	3	0	0	3
9	19ECE32	Robotics	3	0	0	3
10	19ECE33	Real Time Controllers	3	0	0	3
11	19ECE34	Real Time Microcomputer Systems	3	0	0	3

ELECTRONICS & VLSI

S. No.	Course Code	Course Name	L	T	P	C
1	19ECE35	Biomedical Instrumentation	3	0	0	3
2	19ECE36	Power Electronics	3	0	0	3
3	19ECE37	Sensors and Transducers	3	0	0	3
4	19ECE38	Biomedical Transducers and Biosensors	3	0	0	3
5	19ECE39	Nano Electronics	3	0	0	3
6	19ECE40	Nano Sensors and Devices	3	0	0	3
7	19ECE41	Verilog HDL	3	0	0	3
8	19ECE42	HDL Based System Design	3	0	0	3
9	19ECE43	Introduction to Miniaturization Technologies	3	0	0	3
10	19ECE44	Mems	3	0	0	3
11	19ECE45	VLSI Process Technology	3	0	0	3
12	19ECE46	Low Power VLSI Design	3	0	0	3
13	19ECE47	IC Fabrication Technology	3	0	0	3
14	19ECE48	CMOS Analog IC Design	3	0	0	3

MICROWAVE & RF

S. No.	Course Code	Course Name	L	T	P	C
1	19ECE49	Electromagnetic Radiation Hazards and Safety	3	0	0	3
2	19ECE50	Modern Antennas	3	0	0	3
3	19ECE51	Advanced Antenna Technology	3	0	0	3
4	19ECE52	Electromagnetic Interference and Compatibility	3	0	0	3
5	19ECE53	RF Microelectronics	3	0	0	3

LIST OF ONE CREDIT COURSES

S. No.	Course Code	Title of the Course	Group
1	19ECOC01	Basics of Python	I
2	19ECOC02	Quantitative Aptitude for Engineers/ Verbal Aptitude for Engineers	III
3	19ECOC03	Problem Solving with Algorithms and Data Structures	I
4	19ECOC04	Programming in C: A Practical Approach	I
5	19ECOC05	Programming in C++	I
6	19ECOC06	Web Designing and Java	I
7	19ECOC07	Virtual Instrumentation	I
8	19ECOC08	Internet of Things : A Hands-on Approach	I
9	19ECOC09	Machine Learning Algorithms Using Python	I
10	19ECOC10	Programming in Scilab	I
11	19ECOC11	PCB Design and Fabrication	II
12	19ECOC12	Drone - Design & Development	II
13	19ECOC13	Lora Technology	II
14	19ECOC14	Application Design Using Raspberry PI & Python	II
15	19ECOC15	Internet of Things (IoT) Communication Protocols	II
16	19ECOC16	Communication Skills for Engineers	III
17	19ECOC17	Entrepreneurship and Management	III
18	19ECOC18	Professional Skills for Engineers	III
19	19ECOC19	Leadership and Management Skills for Engineers	III
20	19ECOC20	Innovation Management	III
21	19ECOC21	Project Management	III
22	19ECOC22	HMS foundation course on Mobile App Development	II
23	19ECOC23	Baseband Communication - Signal generation and analysis	II
24	19ECOC24	RF Measurement Laboratory	II
25		NPTEL COURSES	IV

GROUP	GROUP NAME
I	PROGRAMMING COURSES
II	INDUSTRY COLLABORATED COURSES
III	SOFT SKILLS DEVELOPMENT COURSES
IV	NPTEL COURSES

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University)

B.E. ELECTRICAL AND ELECTRONICS ENGINEERING (FULL TIME)

CHOICE BASED CREDIT SYSTEM

Curriculum from the Academic Year 2019 - 2020 and onwards

SUBJECTS OF STUDY

Semester III

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19EEM31	Transforms, Probability and Random Variables	3	0	0	3	BS
2	19EE31	Electric Circuit Analysis	2	1	0	3	PCC
3	19EE32	Electromagnetic Fields	2	1	0	3	PCC
4	19EE33	DC Machines and Transformers	3	0	0	3	PCC
5	19EE34	Analog Electronics	3	0	0	3	PCC
6	19EE35	Digital Electronics	3	0	0	3	PCC
7	19HSS01	Science of Creativity and Professional Ethics	1	0	0	1	HS
8	19EEL36	DC Machines and Transformers Laboratory	0	0	2	1	PCC
9	19EEL37	Analog and Digital Electronics Laboratory	0	0	2	1	PCC
10		One Credit Course 1				1	OCC
11	19HOC31	Communication Skills For Engineers I*	0	0	2	1	EEC
(BS - 3, HS - 1, PCC - 17, OCC - 1, EEC - 1)		**TOTAL CREDITS**				**23**	
* Not to be counted for GPA. Pass is required							

Semester IV

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19EE41	AC Rotating Machines	3	0	0	3	PCC
2	19EE42	Networks and Systems	3	0	0	3	PCC
3	19EE43	Measurements and Instrumentation	3	0	0	3	PCC
4	19EE44	Linear Integrated Circuits	3	0	0	3	PCC
5	19EE45	Transmission and Distribution	3	0	0	3	PCC
6	19EE46	OOPS and C++ for Electrical Engineers	3	0	0	3	PCC
7	19EEL47	AC Rotating Machines Laboratory	0	0	2	1	PCC
8	19EEL48	Linear Integrated Circuits Laboratory	0	0	2	1	PCC
9		One Credit Course 2				1	OCC
10	19HOC41	Communication Skills For Engineers II*	0	0	2	1	EEC
(PCC - 20, OCC - 1, EEC - 1)		**TOTAL CREDITS**				**22**	
* Not to be counted for GPA. Pass is required							

Semester V

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19EE51	Control Systems	3	0	0	3	PCC
2	19EE52	Power System Analysis	3	0	0	3	PCC
3	19EE53	Data Structures and Algorithms	3	0	0	3	PCC
4	19EE54	Embedded System Design	3	0	0	3	PCC
5		Elective Course 1	3	0	0	3	EC
6		Elective Course 2	3	0	0	3	EC
7	19EEL55	Control systems Laboratory	0	0	2	1	PCC
8	19EEL56	Embedded System Design Laboratory	0	0	2	1	PCC
9		One Credit Course 3				1	OCC
10	19EEL66	Mini Project	-	-	2	-	EEC
11	19INT51	Internship - I	-	-	-	1	EEC
12	19HOC51	Employability and Personality Development Skills - I *	0	0	2	1	EEC
(PCC - 14, EC - 6, OCC - 1, EEC - 2) **TOTAL CREDITS**						23	
* Not to be counted for GPA. Pass is required							

Semester VI

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19EE61	Power Electronics	3	0	0	3	PCC
2	19EE62	Digital Protection of Power Systems	3	0	0	3	PCC
3	19EE63	Digital Signal Processing	3	1	0	4	PCC
4		Elective Course 3	3	0	0	3	EC
5		Elective Course 4	3	0	0	3	EC
6	19EEL64	Power Electronics Laboratory	0	0	2	1	PCC
7	19EEL65	Power Systems Laboratory	0	0	2	1	PCC
8		One Credit Course 4				1	OCC
9	19EEL66	Mini Project	0	0	6	3	EEC
10	19INT61	Internship - II	-	-	-	1	EEC
11	19HOC61	Employability and Personality Development Skills - II*	0	0	2	1	EEC
(PCC - 12, EC - 6, OCC - 1, EEC - 5) **TOTAL CREDITS**						24	
* Not to be counted for GPA. Pass is required							

Semester VII

S. No.	Course Code	Course Name	L	T	P	C	Category
1	19EE71	Solid State Drives and Control	3	0	0	3	PCC
2	19EE72	Generation of Electrical Energy	3	1	0	4	PCC
3	19EE73	Smart Grid	3	0	0	3	PCC
4		Elective Course 5	3	0	0	3	EC
5		Elective Course 6	3	0	0	3	EC
6	19EEL74	Electrical Drives Laboratory	0	0	2	1	PCC
7	19EEL75	Professional Competency	0	0	4	2	PCC
8	19EE76	Project Work Phase - I	0	0	6	3	EEC
(PCC - 13, EC - 6, EEC - 3)		TOTAL CREDITS				22	

Semester VIII

S. No.	Course Code	Course Name	L	T	P	C	Category
1		Elective Course 7	3	0	0	3	EC
2		Elective Course 8	3	0	0	3	EC
3	19EE81	Project Work Phase - II	0	0	10	5	EEC
(EC - 6, EEC - 5)		TOTAL CREDITS				11	

TOTAL CREDITS : 164 *

* Including First Year Credits

Category : **BS** - Basic Sciences, **HS** - Humanities and Social Sciences, **ES** - Engineering Sciences, **PCC** - Professional Core Course, **EC** - Elective Course, **EEC** - Employability Enhancement Course, **OCC** - One Credit Course.

LIST OF ONE CREDIT COURSES *

1. DEPARTMENT BASED ONE CREDIT COURSES

S. No.	Course Code	Course Name	Credit	Category
1	19EEOC06	Electrical Safety Standards and Practices	1	OCC
2	19EEOC07	Scilab Programming	1	OCC

2. INDUSTRY BASED ONE CREDIT COURSES

S. No.	Course Code	Course Name	Credit	Category
1	19EEOC08	Machine Vision	1	OCC
2	19EEOC09	Cyber Security in Manufacturing and Smart Grid	1	OCC
3	19EEOC10	Robotics and Automation	1	OCC
4	19EEOC12	AWS Cloud Practitioner Essentials	1	OCC
5	19EEOC13	Introduction to IoT	1	OCC
6	19EEOC14	TCS ION Career Edge Young Professional	1	OCC

* One credit courses could be opted from Department/Industry/NPTEL

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

B.E. COMPUTER SCIENCE AND ENGINEERING

CHOICE BASED CREDIT SYSTEM

Curriculum from the academic year 2019 - 2020 onwards

SUBJECTS OF STUDY

Semester III

Course Code	Course Name	L	T	P	Credits	Category
19CIM31	Linear Algebra, Complex Variables and Transform Techniques	3	1	0	4	BSC
19CI31	Data Structures and Algorithms - I	3	1	0	4	PCC
19CI32	Digital Design	3	0	0	3	ESC
19CS31	Discrete Mathematics	2	0	0	2	PCC
19CI33	Object Oriented Programming and Java	3	0	0	3	PCC
19HSS01	Science of Creativity and Professional Ethics	1	0	0	1	HSC
19CIL34	Digital Design Laboratory	0	0	3	1.5	ESC
19CIL35	Object Oriented Programming Laboratory	0	0	3	1.5	PCC
	One Credit Course	0	0	2	1	OCC
19HOC31	Communication Skills for Engineers - I*	0	0	2	1	EEC
	Total Credits				**22**	

Semester IV

Course Code	Course Name	L	T	P	Credits	Category
19CI41	Data Structures and Algorithms- II	3	0	0	3	PCC
19CI42	Database Management Systems	3	0	0	3	PCC
19CI43	Computer Architecture	3	0	0	3	PCC
19CI44	Operating Systems	3	0	0	3	PCC
19CI45	Software Engineering	2	1	0	3	PCC
19CS41	Formal Languages and Automata Theory	2	0	0	2	PCC
19CIL46	Database Management Systems Laboratory	0	0	3	1.5	PCC
19CIL47	Data Structures and Algorithms Laboratory	0	0	3	1.5	PCC
	One Credit Course	0	0	2	1	OCC
19HOC41	Communication Skills for Engineers - II*	0	0	2	1	EEC
	Total Credits				**22**	

* Not to be counted for GPA. Pass is required.

Semester V

Course Code	Course Name	Periods			Credits	Category
		L	T	P		
19CI51	Computer Networks	3	0	0	3	PCC
19CS51	Unix Internals	3	0	0	3	PCC
19CI52	Data Warehousing and Data Mining	3	0	0	3	PCC
19CS52	Statistical Data Analysis	2	1	0	3	PCC
	Elective - I	3	0	0	3	PEC/OEC
	Elective - II	3	0	0	3	PEC/OEC
19CIL54	Computer Networks Laboratory	0	0	2	1	PCC
19CIL48	Operating Systems Laboratory	0	0	2	1	PCC
	One Credit Course	0	0	2	1	OCC
19HOC51	Employability and Personality Development Skills - I*	0	0	2	1	EEC
19CS65	Mini Project	0	0	3	-	EEC
19INT51	Internship-I*	-	-	-	1	EEC
	Total Credits				**23**	

Semester VI

Course Code	Course Name	Periods			Credits	Category
		L	T	P		
19CI53	Embedded Systems	3	0	0	3	PCC
19CS61	Internet of Things and Its Applications	3	0	0	3	PCC
19CS62	Machine Learning	3	0	0	3	PCC
	Elective - III	3	0	0	3	PEC/OEC
	Elective - IV	3	0	0	3	PEC/OEC
19CSL63	Embedded Systems & IOT Laboratory	0	0	2	1	PCC
19CSL64	Machine Learning Laboratory	0	0	2	1	PCC
19HOC61	Employability and Personality Development Skills-II*	0	0	2	1	EEC
	One Credit Course	0	0	2	1	OCC
19CS65	Mini Project	0	0	3	3	EEC
19INT61	Internship-II*	-	-	-	1	EEC
	Total Credits				**23**	

*Internship to be completed during 4th semester and 5th semester vacation

* Not to be counted for GPA. Pass is required.

Semester VII

Course Code	Course Name	Periods			Credits	Category
		L	T	P		
19CS71	Principles of Compiler Design	3	1	0	4	PCC
19CI61	Artificial Intelligence	3	0	0	3	PCC
19CI71	Cryptography and Network Security	3	1	0	4	PCC
	Elective - V	3	0	0	3	PEC/OEC
	Elective - VI	3	0	0	3	PEC/OEC
19CSL72	Compiler Design Laboratory	0	0	3	1.5	PCC
19CSL73	Artificial Intelligence Laboratory	0	0	3	1.5	PCC
19CS74	Project Phase-I	0	0	6	3	EEC
	Total Credits				**23**	

Semester VIII

Course Code	Course Name	Periods			Credits	Category
		L	T	P		
	Elective - VII	3	0	0	3	PEC/OEC
	Elective - VIII	3	0	0	3	PEC/OEC
19CS81	Project Phase-II	0	0	10	5	EEC
	Total Credits				**11**	

Note :

• Open Electives (Maximum 2) can be opted from other departments as approved by CSE department.

• NPTEL 3 credit courses can be opted instead of electives with approval of department.

TOTAL CREDITS

CREDITS (First and Second semester) :   40

CREDITS (Third to Eight semester)   :   124

TOTAL   :   164 Credits

SCC-Subject Category Code:

HSC - Humanities and Social Sciences, BSC - Basic Science Courses, ESC - Engineering Science Courses, PCC- Professional Core Courses, PEC - Professional Elective Courses, OEC - Open Elective Courses, EEC - Project Work, Entrepreneurship, Seminar, Soft skills, Internship, Comprehensive Test, MCC - Mandatory Courses, OCC - One Credit Courses

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

Course Code	Course Name	L	T	P	C	Semester
19FYE11	Employability Skills	0	0	2	1	I
19FYEL21	English for Employability	0	0	2	1	II
19HOC31	Communication Skills for Engineers - I	0	0	2	1	III
19HOC41	Communication Skills for Engineers - II	0	0	2	1	IV
19HOC51	Employability and Personality Development Skills-I	0	0	2	1	V
19HOC61	Employability and Personality Development Skills-II	0	0	2	1	VI
19INT51	Internship-I	-	-	-	1	V
19CS65	Mini Project	0	0	6	3	VI
19INT61	Internship-II	-	-	-	1	VI
19CS74	Project Phase-I	0	0	6	3	VII
19CS81	Project Phase-II	0	0	10	5	VIII

ONE CREDIT COURSES (OCC)

1. Department Offered :

Course Code	Course Name	L	T	P	C
19CIOC01	C++ Programming	0	0	2	1
19CIOC02	R Programming	0	0	2	1
19CIOC03	Applications of Probability	0	0	2	1
19CIOC04	User Interface Design	0	0	2	1
19CIOC05	Open-Source Tools for Network Analysis	0	0	2	1
19CIOC06	Comprehensive Exam Training	0	0	2	1

2. Industry Offered :

Course Code	Course Name	L	T	P	C
19CSOC01	Software Testing Tools - Selenium	0	0	2	1
19CSOC02	Software Testing Tools - JMeter	0	0	2	1
19CSOC03	Software Testing Tools - TOSCA	0	0	2	1
19CSOC04	Data Science Tools- Jupyter	0	0	2	1
19CSOC05	MATLAB/SCILAB	0	0	2	1

3. NPTEL Offered (4 weeks courses not part of the curriculum)

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University)

B.Tech. CHEMICAL ENGINEERING

Curriculum from the Academic Year - 2019

SUBJECTS OF STUDY

Semester III

Course Code	Course Name	L	T	P	C	CAT
19CEM31	Differential Equations and Boundary Value Problems	2	1	0	3	BS
19CH31	Mechanics of Solids	3	0	0	3	ES
19CH32	Fluid Mechanics	2	1	0	3	PCC
19CH33	Chemical Engineering Thermodynamics	2	1	0	3	PCC
19CH34	Environmental Science	3	0	0	3	PCC
19CH35	Chemical Process Calculations	2	1	0	3	PCC
19HSS01	Science of Creativity and Professional Ethics	1	0	0	1	HS
19CHL36	Computer Laboratory (Programming for problem solving)	0	0	2	1	ES
19CHL37	Electrical and Electronics Engineering Laboratory	0	0	2	1	ES
	One Credit Course	1	0	0	1	
19HOC31	Communication Skills for Engineers - I*	0	0	2	1	EEC
	TOTAL CREDITS				**23**	

Semester IV

Course Code	Course Name	L	T	P	C	CAT
19CH41	Biology for Chemical Engineers	3	0	0	3	ES
19CH42	Mechanical Operations	2	1	0	3	PCC
19CH43	Chemical Reaction Engineering - I	2	1	0	3	PCC
19CH44	Heat Transfer	2	1	0	3	PCC
19CH45	Mass Transfer - I	2	1	0	3	PCC
19CH46	Instrumental Methods of Analysis	3	0	0	3	PCC
19CHL47	Fluid Mechanics Laboratory	0	0	2	1	PCC
19CHL48	Technical Analysis Laboratory	0	0	2	1	PCC
	One Credit Course	1	0	0	1	
19HOC41	Communication Skills for Engineers - II*	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

* Not to be counted for GPA. Pass is required.

Semester V

Course Code	Course Name	L	T	P	C	CAT
19CH51	Numerical Methods in Chemical Engineering	2	1	0	3	PCC
19CH52	Chemical Reaction Engineering- II	2	1	0	3	PCC
19CH53	Mass Transfer-II	2	1	0	3	PCC
	Elective - I	3	0	0	3	PEC
	Elective - II	3	0	0	3	PEC
19CHL56	Entrepreneurship Development	0	0	2	1	HS
19CHL57	Mechanical Operations Laboratory	0	0	2	1	PCC
19CHL58	Heat Transfer Laboratory	0	0	2	1	PCC
	One Credit Course	1	0	0	1	-
19CH68	Mini Project*	0	0	2	No Credit	EEC
19INT51	Internship-I#	0	0	2	1	EEC
19HOC51	Employability and Personality Development Skills-I*	0	0	2	1	EEC
	TOTAL CREDITS				**21**	

Internship - I to be completed during 4th semester vacation

* Mini Project will be evaluated in 6th Semester

Semester VI

Course Code	Course Name	L	T	P	C	CAT
19CH61	Process Dynamics and Control	2	1	0	3	PCC
19CH62	Chemical Process Industries	3	0	0	3	PCC
19CH63	Chemical Process Safety	3	0	0	3	PCC
	Elective - III	3	0	0	3	PEC
	Elective - IV	3	0	0	3	PEC
19CHL66	Chemical Reaction Engineering Laboratory	0	0	2	1	PCC
19CHL67	Mass Transfer Laboratory	0	0	2	1	PCC
	One Credit Course	1	0	0	1	-
19CH68	Mini Project	0	0	4	2	EEC
19INT61	Internship-II#	0	0	2	1	EEC
19HOC61	Employability and Personality Development Skills-II*	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Internship-II to be completed during 5th semester vacation

* Not to be counted for GPA. Pass is required.

Semester VII

Course Code	Course Name	L	T	P	C	CAT
19CH71	Transport Phenomena	2	1	0	3	PCC
19CH72	Process Economics and Technology Management	3	0	0	3	PCC
19CH73	Process Modeling and Simulation	2	1	0	3	PCC
19CH74	Electrochemical Engineering	3	0	0	3	PEC
	Elective - V	3	0	0	3	PEC/OEC
19CHL76	Process Equipment Design and Drawing	0	0	4	2	PCC
19CHL77	Process Control and Simulation Laboratory	0	0	2	1	PCC
19CH78	Project Work Phase - I	0	0	6	3	EEC
	TOTAL CREDITS				21	

Semester VIII

Course Code	Course Name	L	T	P	C	CAT
	Elective -VI	3	0	0	3	PEC
	Elective-VII	3	0	0	3	PEC
	Elective-VIII	3	0	0	3	PEC/OEC
19CH84	Project Work Phase - II	0	0	10	5	EEC
	TOTAL CREDITS				14	

Category : BS - Basic Science, HS - Humanities and Social Science, ES - Engineering Science, PCC - Professional Core Course, PEC - Professional Elective Course, OEC - Open Elective Course, EEC - Employability Enhancement Courses.

Total Credits

Semester	Credits
I	21
II	21
III	23
IV	22
V	21
VI	22
VII	21
VIII	14
TOTAL	**165**

Category Wise Credit Distribution

Curriculum Components	Sem-I	Sem-II	Sem-III	Sem-IV	Sem-V	Sem-VI	Sem-VII	Sem-VIII	Total
BS	12	9	3	-	-	-	-	-	24
HS	2	5	1	-	1	-	-	-	9
ES	6	6	5	3	-	-	-	-	20
PCC	-	-	12	17	11	11	12	-	63
PEC	-	-	-	-	6	6	3	6	21
OEC	-	-	-	-	-	-	3	3	06
EEC	1	1	1	1	2	4	3	5	18
One Credit Course	-	-	1	1	1	1	-	-	4
Total	21	21	23	22	21	22	21	14	165

CATEGORY WISE CREDIT DISTRIBUTON
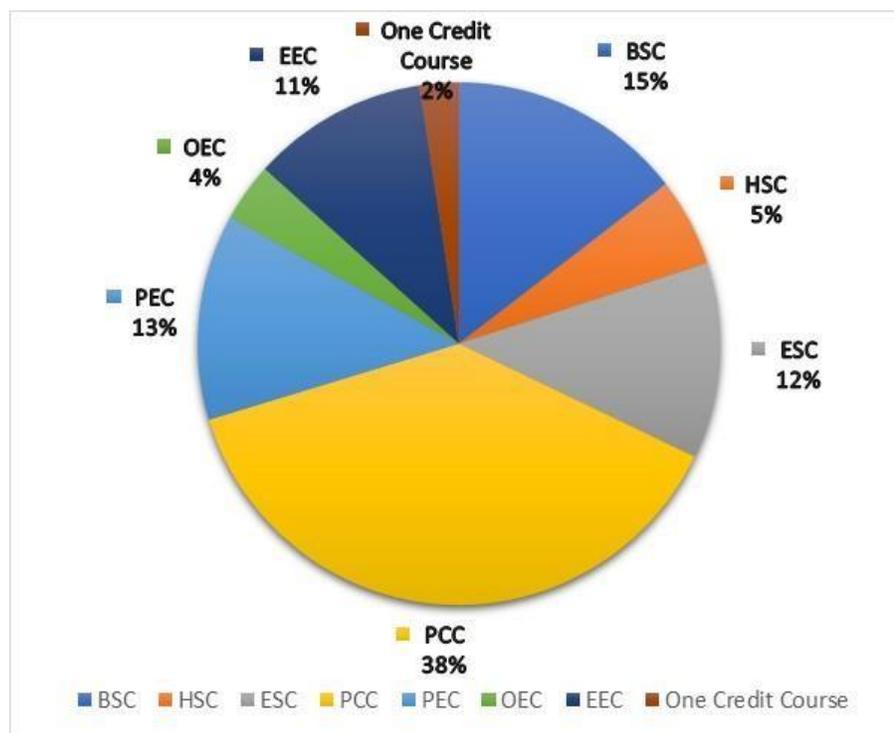
LIST OF PROFESSIONAL ELECTIVE COURSES

S. No.	Course Code	Name of Subject	Credits
1.	19CHE01	Water Conservation and Management	3
2.	19CHE02	Sustainability Engineering	3
3.	19CHE03	Nanoscience and Nanotechnology for Chemical Science	3
4.	19CHE04	Polymer Science and Engineering	3
5.	19CHE05	Renewable Energy	3
6.	19CHE06	Advanced Separation Processes	3
7.	19CHE07	Environmental Pollution and Control	3
8.	19CHE08	Colloid and Interfacial Engineering	3
9.	19CHE09	Energy Management in Chemical Industries	3
10.	19CHE10	Biochemical Engineering	3
11.	19CHE11	Process Engineering	3
12.	19CHE12	Petroleum Refinery Engineering	3
13.	19CHE13	Drugs and Pharmaceuticals Technology	3
14.	19CHE14	Food Technology	3
15.	19CHE15	Piping and Instrumentation	3
16.	19CHE16	Process Automation	3
17.	19CHE17	Process Instrumentation	3
18.	19CHE18	Total Quality Management	3
19.	19CHE19	Optimization Methods	3
20.	19CHE20	Integrated Design of Chemical Processes	3
21.	19CHE21	Computer Aided Process Equipment Design	3
22.	19CHE22	Sugar Technology	3
23.	19CHE23	Energy Technology	3
24.	19CHE24	Petrochemicals Technology	3
25.	19CHE25	Fertilizer Technology	3
26.	19CHE26	Mineral Processing Technology	3
27.	19CHE27	Fluidization Engineering	3
28.	19CHE28	Pulp and Paper Technology	3
29.	19CHE29	Surface Coating Technology	3
30.	19CHE30	Heat Power Engineering	3
31.	19CHE31	Carbon Capture	3
32.	19CHE32	Material Science and Technology	3
33.	19CHE33	Bioprocess Technology	3
34.	19CHE34	Pilot Plant and Scale-up Methods	3

LIST OF ONE CREDIT COURSES

S. No.	Course Code	Title of the Course
		GROUP-I
		Personality and Skill Development Courses
1	19CHOC01	Critical Thinking
2	19CHOC02	Creativity & Innovation
3	19CHOC03	Leadership
4	19CHOC04	Emotional Intelligence
5	19CHOC05	Health and Lifestyle
6	19CHOC06	Psychology for Engineers
		GROUP-II
		Social Responsibility & Environment Audit Courses
7	19CHOC07	Fundamentals of Nanoscience
8	19CHOC08	An Introduction to Environmental Ethics
9	19CHOC09	Corporate Social Responsibilities
10	19CHOC10	Composite Material Preparation and Characterization
11	19CHOC11	Environmental Impact Assessment and Audit
		GROUP-III
		Control and Automation Courses
12	19CHOC12	Factory Automation
13	19CHOC13	Controller Tuning
14	19CHOC14	Neural Networks and Fuzzy Systems
15	19CHOC15	Internet of Things
16	19CHOC16	Process Automation and Fault Diagnosis
17	19CHOC17	Process Control in Petrochemical Industries
18	19CHOC18	Power Plant Instrumentation
19	19CHOC19	Industrial Automation
20	19CHOC20	Biomedical Instrumentation
		GROUP-IV
		Energy and Nano Technology Courses
21	19CHOC21	Energy Materials, Devices and Systems
22	19CHOC22	Surface Engineering of Nanomaterials
23	19CHOC23	Nano sensors : Basic components, Characterization and Application
24	19CHOC24	Nanopolymers : Synthesis, Characterization and Applications
25	19CHOC25	An approach to Nanotribology and Nanomechanics
26	19CHOC26	Nanomaterials and Nanofibers
27	19CHOC27	Biomass Conversion to Biofuels and Bioenergy
28	19CHOC28	Biofuel: Fate and Future
29	19CHOC29	Dimensional Analysis and Theory of Models
30	19CHOC30	Pinch Technology
31	19CHOC31	Drug Delivery Systems

S. No.	Course Code	Title of the Course
		GROUP-V
		Waste Treatment and Environment Science Courses
32	19CHOC32	Research Skills
33	19CHOC33	E-Waste Material Flow and Management Practices
34	19CHOC34	Chemicals in the Environment: Fate & Transport
35	19CHOC35	An Integrated approach for wastewater treatment
36	19CHOC36	Textile Effluents : Analysis and Treatment Methods
37	19CHOC37	Advanced Recycling and Recovery Technologies for E-Waste
		GROUP-VI
		Certification Courses
38	19CHOC38	NPTEL / MOOC Certification Courses (Chemical Engineering and Allied Courses)

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

B.Tech. INFORMATION TECHNOLOGY

CHOICE BASED CREDIT SYSTEM

Curriculum from the academic year 2019-2020 onwards

SUBJECTS OF STUDY

Semester III

Course Code	Course Name	L	T	P	C	Category
19CIM31	Linear Algebra, Complex Variables and Transform Techniques	3	1	0	4	BS
19CI31	Data Structures and Algorithms - I	3	1	0	4	PC
19CI32	Digital Design	3	0	0	3	ES
19IT31	Discrete Mathematics And Automata Theory	3	0	0	3	PC
19CI33	Object Oriented Programming and Java	3	0	0	3	PC
19HSS01	Science Of Creativity and Professional Ethics	1	0	0	1	HS
19CIL34	Digital Design Laboratory	0	0	3	1.5	ES
19CIL35	Object Oriented Programming Laboratory	0	0	3	1.5	PC
	One Credit Course	0	0	2	1	OCC
19HOC31	Communication Skills for Engineers - I*	0	0	2	1	EEC
	TOTAL CREDITS				**23**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
19CI41	Data Structures and Algorithms II	3	0	0	3	PC
19CI42	Database Management Systems	3	0	0	3	PC
19CI43	Computer Architecture	3	0	0	3	PC
19CI44	Operating Systems	3	0	0	3	PC
19CI45	Software Engineering	2	1	0	3	PC
19CIL46	Database Management Systems Laboratory	0	0	3	1.5	PC
19CIL47	Data Structures and Algorithms Laboratory	0	0	3	1.5	PC
19CIL48	Operating Systems Laboratory	0	0	2	1	PC
	One Credit Course	0	0	2	1	OCC
19HOC41	Communication Skills for Engineers -II*	0	0	2	1	EEC
	TOTAL CREDITS				**21**	

* Not to be counted for GPA. Pass is required.

Semester V

Course Code	Course Name	L	T	P	C	Category
19CI51	Computer Networks	3	0	0	3	PC
19CI52	Data Warehousing and Data Mining	3	0	0	3	PC
19CI53	Embedded Systems	3	0	0	3	PC
19IT51	Economics for Engineers	2	0	0	2	HS
	Elective-I	3	0	0	3	PE/OE
	Elective-II	3	0	0	3	PE/OE
19ITL52	Embedded Systems Laboratory	0	0	2	1	PC
19CIL54	Computer Networks Laboratory	0	0	2	1	PC
	One Credit Course	0	0	2	1	OCC
19HOC51	Employability and Personality Development Skills - I*	0	0	2	1	EEC
19IT65	Mini Project	0	0	3	-	EEC
19INT51	Internship-I	0	0	0	1	EEC
	TOTAL CREDITS				**22**	

Semester VI

Course Code	Course Name	L	T	P	C	Category
19CI61	Artificial Intelligence	3	0	0	3	PC
19IT61	Mobile Computing	3	0	0	3	PC
19IT62	Internet Technology	3	0	0	3	PC
	Elective-III	3	0	0	3	PE/OE
	Elective-IV	3	0	0	3	PE/OE
19ITL63	Data Analytics and Artificial Intelligence Laboratory	0	0	3	1.5	PC
19ITL64	Internet Technology & Software Engineering Laboratory	0	0	3	1.5	PC
	One Credit Course	0	0	2	1	OCC
19HOC61	Employability and Personality Development Skills - II*	0	0	2	1	EEC
19IT65	Mini Project	0	0	3	3	EEC
19INT61	Internship -II	0	0	0	1	EEC
	TOTAL CREDITS				**24**	

• Internship/Project to be completed during 4th and 5th semester vacation

* Not to be counted for GPA. Pass is required.

Semester VII

Course Code	Course Name	L	T	P	C	Category
19CI71	Cryptography and Network Security	3	1	0	4	PC
19IT71	Distributed Systems	3	0	0	3	PC
19IT72	Internet of Things	3	1	0	4	PC
	Elective-V	3	0	0	3	PE/OE
	Elective-VI	3	0	0	3	PE/OE
19ITL73	Internet of Things Laboratory	0	0	3	1.5	PC
19ITL74	Mobile Application Development Laboratory	0	0	3	1.5	PC
19IT75	Project Phase-I	0	0	6	3	EEC
	TOTAL CREDITS				**23**	

Semester VIII

Course Code	Course Name	L	T	P	C	Category
	Elective-VII	3	0	0	3	PE/OE
	Elective-VIII	3	0	0	3	PE/OE
19IT81	Project Phase-II	0	0	10	5	EEC
	TOTAL CREDITS				**11**	

Total Credits : 164 (4 years B.Tech (IT))

Total Credits : 126 (Lateral B.Tech (IT))

122* Credits for Laterals + 4 Credits - Bridge

Course (Engineering Mathematics - 2 Credits & Physical - Sciences - 2 Credits)

LIST OF PROFESSIONAL ELECTIVES (PE)

Course Code	Course Name	L	T	P	C
19ITE01	Advanced Algorithms	3	0	0	3
19CIE01	Ad-hoc Networks	3	0	0	3
19ITE02	Advanced Computer Architecture	3	0	0	3
19ITE03	Advanced Operating Systems	3	0	0	3
19CIE02	Big Data Analytics	3	0	0	3
19CIE03	Bioinformatics	3	0	0	3
19CIE04	Block Chain Technology	3	0	0	3
19CIE05	Cloud and Virtualization	3	0	0	3
19ITE04	Customer Relationship Management	3	0	0	3
19ITE05	Cyber Security	3	0	0	3
19ITE06	Data Communications	3	0	0	3
19CIE06	Digital Forensics	3	0	0	3
19ITE07	Digital Image Processing	3	0	0	3
19CIE07	Entrepreneurship Skill Development	3	0	0	3
19CIE08	Graph Theory	3	0	0	3
19CIE09	Graphics and Multimedia Systems	3	0	0	3
19ITE08	Human Computer Interaction	3	0	0	3
19ITE09	Information Retrieval	3	0	0	3
19CIE10	Information Security	3	0	0	3
19CIE11	Information Storage Management	3	0	0	3
19CIE12	Information Theory and coding	3	0	0	3
19CS62	Machine Learning	3	0	0	3
19ITE10	Multi-Agent Intelligent System	3	0	0	3
19CIE13	Neural Networks and Deep Learning	3	0	0	3
19CIE14	Object Oriented Analysis and Design	3	0	0	3
19CIE15	Open Source Systems	3	0	0	3
19CS71	Principles of Compiler Design	3	0	0	3
19CIE16	Parallel Architecture and Programming	3	0	0	3
19ITE11	Real Time Systems	3	0	0	3
19CIE17	Resource Management Techniques	3	0	0	3
19ITE12	Semantic Web	3	0	0	3
19CIE18	Service Oriented Architecture and Web Services	3	0	0	3
19ITE13	Soft Computing	3	0	0	3
19ITE14	Software Agents	3	0	0	3
19CIE19	Software Metrics and Measurement	3	0	0	3
19CIE20	Software Testing and Quality Assurance	3	0	0	3
19CIE21	Wireless Sensor Networks	3	0	0	3
19CS51	UNIX internals	3	0	0	3
19ITE15	Full Stack Development	3	0	0	3
19ITE16	Virtual and Augumented Reality	3	0	0	3

ONE CREDIT COURSES (OCC)

1. DEPARTMENT BASED

Course Code	Course Name	L	T	P	C
19CIOC01	C++ Programming	0	0	2	1
19CIOC02	R Programming	0	0	2	1
19CIOC03	Applications of Probability	0	0	2	1
19CIOC04	User Interface Design	0	0	2	1
19CIOC05	Open-Source Tools for Network Analysis	0	0	2	1
19CIOC06	Comprehensive Exam Training	0	0	2	1
19ITOC01	Aptitude Training	0	0	2	1

2. INDUSTRY BASED

Course Code	Course Name	L	T	P	C
19ITOC02	Data Visualization Tools	0	0	2	1
19ITOC03	Data Science Tools	0	0	2	1
19ITOC04	Cloud Computing Applications	0	0	2	1
19ITOC05	Agile Software Development	0	0	2	1
19ITOC06	Software Testing Tool	0	0	2	1

3. NPTEL Offered (4 weeks courses not part of the curriculum)

4. Institute Based

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF CIVIL ENGINEERING

COURSES OF STUDY

For the students admitted during 2019 - 2020 and onwards

Under Choice Based Credit System

Name of the degree   :   M.E. (Full-Time)

Specialization   :   M.E. Structural Engineering

Semester I

Course Code	Course Name	L	T	P	C	CY
19MCE11	Applied Mathematics	4	0	0	4	FC
19MCE12	Applied Elasticity and Plasticity	3	0	0	3	PC
19MCE13	Matrix Methods of Structural Analysis	3	0	0	3	PC
19MCE14	Advanced Reinforced Concrete Structures	3	0	0	3	PC
19MCE15	Advanced Steel Structures	3	0	0	3	PC
	Program Elective - I	3	0	0	3	PE
19MCE16	Computer Applications Laboratory	0	0	4	2	PC
	TOTAL CREDITS				**21**	

Semester II

Course Code	Course Name	L	T	P	C	CY
19MCE21	Structural Dynamics	3	0	0	3	PC
19MCE22	Finite Element Method	3	0	0	3	PC
19MCE23	Design of Foundation Structures	3	0	0	3	PC
	Program Elective - II	3	0	0	3	PE
	Program Elective - III	3	0	0	3	PE
	Program Elective - IV	3	0	0	3	PE
19MCE24	Advanced Structural Engineering Laboratory	0	0	4	2	PC
	TOTAL CREDITS				**20**	

Semester III

Course Code	Course Name	L	T	P	C	CY
	Program Elective - V	3	0	0	3	PE
	Program Elective - VI	3	0	0	3	PE
	Open Elective / Professional Elective - VII	3	0	0	3	OE
	One Credit Course	1	0	0	1	EEC
19MCE31	Practical Training	0	0	0	2	EEC
	TOTAL CREDITS				**12**	

Semester IV

Course Code	Course Name	L	T	P	C	CY
19MCE41	Project Work and Viva Voce	0	0	36	18	EEC
	TOTAL CREDITS				**18**	

Total number of credits : 71

LIST OF OPEN ELECTIVES

Course Code	Course Name	L	T	P	C	CY
19MCEOE01	Disaster Management	3	0	0	3	OE
19MCEOE02	Energy Efficient Building	3	0	0	3	OE
19MCMOE01	Landscaping and Architecture	3	0	0	3	OE
19MENOE01	Climate Change and Adaptation	3	0	0	3	OE

LIST OF ONE CREDIT COURSES

Course Code	Course Name	L	T	P	C	CY
19MCOC01	Practical Geotechnical Engineering	1	0	0	1	EEC
19MCOC02	Green Buildings	1	0	0	1	EEC
19MCOC03	Geoinformatics Laboratory	1	0	0	1	EEC
19MCOC04	Sustainable Architecture	1	0	0	1	EEC

LIST OF PROGRAM ELECTIVES

Course Code	Course Name	L	T	P	C	CY
19MCEE01	Stability of Structures	3	0	0	3	PE
19MCEE02	Advanced Concrete Technology	3	0	0	3	PE
19MCEE03	Experimental Techniques and Instrumentation	3	0	0	3	PE
19MCEE04	Earthquake Resistant Design of Structures	3	0	0	3	PE
19MCEE05	Structural Optimization	3	0	0	3	PE
19MCEE06	Health Monitoring of Structures	3	0	0	3	PE
19MCEE07	Prestressed Concrete Structures	3	0	0	3	PE
19MCEE08	Corrosion of Steel in Concrete Structures	3	0	0	3	PE
19MCEE09	Theory of Plates	3	0	0	3	PE
19MCEE10	Design of Concrete Bridges	3	0	0	3	PE
19MCEE11	Design of Steel Concrete Composite Structures	3	0	0	3	PE
19MCEE12	Offshore Structures	3	0	0	3	PE
19MCEE13	Shell Structures	3	0	0	3	PE
19MCEE14	Design of Tall Buildings	3	0	0	3	PE
19MCEE15	Wind and Cyclone Effects on Structures	3	0	0	3	PE
19MCEE16	Soil Structure Interaction	3	0	0	3	PE
19MCEE17	Mechanics of Composite Materials	3	0	0	3	PE
19MCEE18	Prefabricated Structures	3	0	0	3	PE

L : Lecture

T : Tutorial

P : Practical

C : Credits

CY : Category

PC : Program Core

PE : Program Elective

EEC : Employability Enhancement Course

OE : Open elective

OC : One credit course

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

M.E. (ENVIRONMENTAL ENGINEERING AND MANAGEMENT)

(Curriculum from the Academic Year 2019-2020 onwards)

SUBJECTS OF STUDY

Semester I

Course Code	Course Name	Category	L	T	P	C
19MEN11	Applied Statistics and Probability	FC	3	0	0	3
19MEN12	Environmental Chemistry	PC	3	0	0	3
19MEN13	Environmental Microbiology	PC	3	0	0	3
19MEN14	Separation Process In Environmental Engineering	PC	3	0	0	3
19MEN15	Industrial Wastewater Treatment and Management	PC	3	0	0	3
	Program Elective - I	PE	3	0	0	3
19MEN16	Process Engineering Laboratory - I	PC	0	0	4	2
	TOTAL		**18**	**0**	**4**	**20**

Semester II

Course Code	Course Name	Category	L	T	P	C
19MEN21	Design of Water and wastewater treatment Plant	PC	3	0	0	3
19MEN22	Air Pollution and Control	PC	3	0	0	3
19MEN23	Solid and Hazardous Waste Management	PC	3	0	0	3
	Program Elective - 2	PE	3	0	0	3
	Program Elective - 3	PE	3	0	0	3
	Program Elective - 4	PE	3	0	0	3
19MEN24	Process Engineering Laboratory - II	PC	0	0	4	2
	TOTAL		**18**	**0**	**4**	**20**

Semester III

Course Code	Course Name	Category	L	T	P	C
	Program Elective - 5	PE	3	0	0	3
	Program Elective - 6	PE	3	0	0	3
	Open Elective / Professional Elective - VII	OE	3	0	0	3
19MEN31	Practical Training	EEC	-	-	-	2
	One credit course	EEC	0	-	2	1
	TOTAL		**10**	**0**	**2**	**12**

Semester IV

Course Code	Course Name	Category	L	T	P	C
19MEN41	Project	EEC	0	0	36	18
	TOTAL		**0**	**0**	**36**	**18**

Total Credits : 70

L - Lecture, T - Tutorial, P - Practical, C - Credit, FC - Foundation Course, PC - Professional Core,

PE - Professional Elective, EEC - Employment Enhancement Course

LIST OF PROGRAM ELECTIVES

Course Code	Course Name
19MENE01	Environmental Biotechnology
19MENE02	Adsorption Technology
19MENE03	Instrumental Method of Analysis
19MENE04	Noise Pollution and Management
19MENE05	Ecology and Ecosystem Management
19MENE06	Optimization of Environmental Systems
19MENE07	Air and Water Quality Modelling
19MENE08	Geo Environmental Engineering
19MENE09	Transport of Water and Wastewater
19MENE10	Environmental Impact Assessment
19MENE11	Design of Environmental Engineering Structures
19MENE12	Biodegradation and Bioremediation Techniques
19MENE13	Energy Management
19MENE14	Environmental Economics and Legislation
19MENE15	Sustainable Development and Cleaner Production

LIST OF OPEN ELECTIVES

Course Code	Course Name
19MENOE01	Climate Change and Adaptation
19MCEOE01	Disaster Management
19MCEOE02	Energy Efficient Building
19MCMOE01	Landscaping and Architecture

LIST OF ONE CREDIT COURSE

Course Code	Course Name
19MCOC01	Practical Geotechnical Engineering
19MCOC02	Green Buildings
19MCOC03	Geo Informatics Laboratory
19MCOC04	Sustainable Architecture

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

M.E. CONSTRUCTION MANAGEMENT

(Curriculum from the Academic Year 2019 - 2020 onwards)

Semester I

Course Code	Course Name	Category	L	T	P	C
19MCM11	Statistical Methods and Research Methodology for Construction Management	FC	3	-	-	3
19MCM12	Construction Project Management	PC	3	-	-	3
19MCM13	Construction Project Formulation and Appraisal	PC	3	-	-	3
19MCM14	Construction Resource Planning and Management	PC	3	-	-	3
19MCM15	Construction Economics and Financial Management	PC	3	-	-	3
	Program Elective - 1	PE	3	-	-	3
19MCM16	Data Analysis Laboratory for Construction Management	PC	-	-	4	2
	Total		**18**	**0**	**2**	**20**

Semester II

Course Code	Course Name	Category	L	T	P	C
19MCM21	Construction Planning, Scheduling and Control	PC	3	-	-	3
19MCM22	Contract Management and Dispute Resolution	PC	3	-	-	3
19MCM23	Quantitative Techniques in Construction Management	PC	3	-	-	3
	Program Elective - 2	PE	3	-	-	3
	Program Elective - 3	PE	3	-	-	3
	Program Elective - 4	PE	3	-	-	3
19MCM24	Project Planning Laboratory for Construction Management	PC	-	-	4	2
	Total		**18**	**0**	**2**	**20**

Semester III

Course Code	Course Name	Category	L	T	P	C
	Program Elective - 5	PE	3	-	-	3
	Program Elective - 6	PE	3	-	-	3
	Open Elective / Program Elective - 7	PE	3	-	-	3
19MCM31	Practical Training	EEC	-	-	-	2
	One Credit course	EEC			-	1
	Total		**9**	**-**	**-**	**12**

Semester IV

Course Code	Course Name	Category	L	T	P	C
19MCM41	Project Work	EEC	-	-	-	18
	Total		**-**	**-**	**-**	**18**

Total Credits to be Earned for the Award of the Degree = 70

FC - Foundation Courses   PC - Professional Core

PE - Professional Electives   EEC - Employment Enhancement Courses

PROFESSIONAL ELECTIVE COURSES (PE)

Course Code	Course Name	Category	L	T	P	C
19MCME01	Advanced Construction Materials and Equipment	PE	3	-	-	3
19MCME02	Quality Management for Construction Projects	PE	3	-	-	3
19MCME03	Management Information systems	PE	3	-	-	3
19MCME04	Advanced Construction Techniques	PE	3	-	-	3
19MCME05	Functional Planning, Building Services and Maintenance Management	PE	3	-	-	3
19MCME06	Construction Risk Management	PE	3	-	-	3
19MCME07	Shoring, Scaffolding and Formwork	PE	3	-	-	3
19MCME08	Advanced Concrete Constructions	PE	3	-	-	3
19MCME09	Valuation of Real Properties	PE	3	-	-	3
19MCME10	Building Information Management	PE	3	-	-	3
19MCME11	Construction Safety and Health Management	PE	3	-	-	3
19MCME12	Lean Construction Concepts, Tools and Practices	PE	3	-	-	3

ONE CREDIT COURSE

Course Code	Course Name
19MCOC01	Practical Geotechnical Engineering
19MCOC02	Green buildings
19MCOC03	Geo informatics laboratory
19MCOC04	Sustainable architecture

PG OPEN ELECTIVES

Course Code	Course Name	Category	L	T	P	C
19MCEOE01	Disaster Management	OE	3	-	-	3
19MCEOE02	Energy efficient buildings	OE	3	-	-	3
19MCMOE01	Landscaping and Architecture	OE	3	-	-	3
19MENOE01	Climate change and adaptation	OE	3	-	-	3

* Add / Include Syllabus for one Credit Course & Open Electives

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Curriculum from the Academic Year 2019 - 2020 onwards

Under Choice Based Credit System

Specialization : Embedded And Real Time Systems

Semester I

Course Code	Course Name	L	T	P	C	Category
19MA11	Linear Algebra and Stochastic Processes	4	0	0	4	FC
19MER11	Real Time Operating Systems	3	1	0	4	PC
19MER12	Embedded Processors	3	0	0	3	PC
19MER13	Wireless Communication Sensors	3	0	0	3	PC
19MA14	Electromagnetic Interference and Compatibility	3	0	0	3	PC
	ELECTIVE I	3	0	0	3	PE
19MER14	Embedded Processors Laboratory	0	0	4	2	PC
	Total				**22**	

Semester II

Course Code	Course Name	L	T	P	C	Category
19MA21	Automation and Industrial Internet of Things	3	0	0	3	PC
19MA22	Robotics Technology and Intelligence	3	0	0	3	PC
19MER21	Embedded System Design using FPGA	3	0	0	3	PC
	ELECTIVE II	3	0	0	3	PE
	ELECTIVE III	3	0	0	3	PE
	ELECTIVE IV	3	0	0	3	PE
19MER22	FPGA based Embedded System Design Laboratory	0	0	4	2	PC
19MAEE01	Feasibility Report Preparation	0	0	4	2	EEC 1
	One Credit Course				1	OCC1
	TOTAL				**23**	

Semester III

Course Code	Course Name	L	T	P	C	Category
	ELECTIVE V	3	0	0	3	PE
	ELECTIVE VI	3	0	0	3	PE
	OPEN ELECTIVE I	3	0	0	3	OE
	One Credit Course				1	OCC 2
	TOTAL				**10**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
19MER41	PROJECT - DISSERTATION	0	0	36	18	EEC2
	TOTAL				18	

TOTAL CREDITS: 73

(**Note :** FC - Foundation Course; PC - Professional Core; PE - Professional Elective; OC - Open Elective; EEC - Employability Enhancement Course; OCC - One Credit Course)

LIST OF PROFESSIONAL ELECTIVES

Course Code	Course Name	L	T	P	C	Category
	EMBEDDED CONTROL OF INDUSTRIAL SYSTEMS					
19MERE01	Intelligent Controllers for Power Quality Enhancement	3	0	0	3	PE
19MERE02	Embedded Control of Industrial Drives	3	0	0	3	PE
19MERE03	Design of Green Transportation System	3	0	0	3	PE
19MERE04	Embedded Sensors Networks	3	0	0	3	PE
	ARCHITECTURE AND PROGRAMMING					
19MERE05	Modeling and Design of Embedded Systems	3	0	0	3	PE
19MERE06	Multicore Architecture	3	0	0	3	PE
19MERE07	System Simulation and Modeling	3	0	0	3	PE
	ELECTRONIC SYSTEM DESIGN					
19MAE10	Digital System Design and Testing	3	0	0	3	PE
19MAE11	Synthesis and Optimization of Digital Circuits	3	0	0	3	PE
19MAE12	Computer Vision	3	0	0	3	PE
19MAE13	High Performance Computer Architecture	3	0	0	3	PE
	EXPERT SYSTEMS					
19MAE14	Cryptography and Block Chain Technologies	3	0	0	3	PE
19MAE15	Augmented Reality	3	0	0	3	PE
19MAE16	Data science & Analytics	3	0	0	3	PE
19MAE17	Network Virtualization	3	0	0	3	PE
19MAE18	Soft Computing	3	0	0	3	PE
19MAE19	Edge Computing	3	0	0	3	PE
19MAE20	Computer Security	3	0	0	3	PE

LIST OF OPEN ELECTIVES

S.No.	Course Code	Course Name	L	T	P	C	Category
1	19MEROE01	Design of Green Transportation System	3	0	0	3	OE
2	19MEROE02	Embedded Sensor Networks	3	0	0	3	OE
3	19MAOE04	Digital System Design and Testing	3	0	0	3	OE
4	19MAOE05	Data Science & Analytics	3	0	0	3	OE

LIST OF ONE CREDIT COURSES*

S.No.	Course Code	Course Name	C	Category
1	19MAOC01	Essential of Research	1	OCC
2	19MAOC02	Data analysis in EXCEL	1	OCC
3	19MAOC03	Educational Technology	1	OCC
4	19MAOC04	Industrial IoT on Google cloud platform	1	OCC
5	19MAOC05	Behavioral Psychology	1	OCC
6	19MAOC06	Battery Management Systems	1	OCC
7	19MAOC07	Communication Network for IoT	1	OCC
8	19MAOC08	Digital Twin Technology	1	OCC
* One Credit Courses opted from Industry / NPTEL / Institute / Department				

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTING

M.SC. (SOFTWARE SYSTEMS)

Curriculum - For the Students admitted during 2020 - 2021 and onwards

Semester I

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS11	Technical English	2	0	0	2	HS
20MSS12	Applied Algebra and Calculus	3	1	0	4	BS
20MSS13	Structured Systems Analysis and Design	3	0	0	3	PC
20MSS14	Digital Electronics	3	0	0	3	PC
20MSS15	Problem Solving using C Programming	3	1	0	4	PC
	PRACTICALS					
20MSS16	Computing Laboratory	0	0	4	2	PC
20MSS17	Programming Laboratory in C	0	0	4	2	PC
20MSS18	Digital Electronics Laboratory	0	0	2	1	PC
20MSS19	Employability Skills	0	0	2	1	EEC
	TOTAL CREDITS				22	

Semester II

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
	Language Elective	2	0	0	2	HS
20MSS21	Probability and Statistics - I	3	1	0	4	BS
20MSS22	Data Structures and Algorithms	3	1	0	4	PC
20MSS23	Fundamentals of Web Technology	3	0	0	3	PC
20MSS24	Object Oriented Programming	3	0	0	3	PC
	PRACTICALS					
20MSS25	Web Application Development Laboratory	0	0	4	2	PC
20MSS26	Data Structures and Algorithms Laboratory	0	0	4	2	PC
20MSS27	Object Oriented Programming Laboratory	0	0	4	2	PC
20MSS28	English for Employability	0	0	2	1	EEC
	TOTAL CREDITS				23	

Semester III

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS31	Theoretical Computer Science	3	0	0	3	BS
20MSS32	Probability and Statistics - II	3	1	0	4	BS
20MSS33	Advanced Data Structures	3	0	0	3	PC
20MSS34	Computer Architecture	3	0	0	3	PC
20MSS35	Operating Systems	3	0	0	3	PC
	PRACTICALS					
20MSS36	Python Programming Laboratory	0	0	4	2	PC
20MSS37	Advanced Data Structures Laboratory	0	0	4	2	PC
20MSS38	Operating Systems Laboratory	0	0	4	2	PC
	TOTAL CREDITS				**22**	

Semester IV

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS41	Resource Management Techniques	3	0	0	3	BS
20MSS42	Microprocessors and Microcontrollers	3	0	0	3	PC
20MSS43	Software Engineering	3	0	0	3	PC
20MSS44	Database Management Systems	3	0	0	3	PC
20MSS45	Java Programming	3	0	0	3	PC
	PRACTICALS					
20MSS46	Microprocessors and Microcontrollers Laboratory	0	0	4	2	PC
20MSS47	Database Management Systems Laboratory	0	0	4	2	PC
20MSS48	Java Programming Laboratory	0	0	4	2	PC
20MSS49	Personality Development	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester V

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS51	Full Stack Application Development	3	0	0	3	PC
20MSS52	Computer Networks	3	0	0	3	PC
20MSS53	Design and Analysis of Algorithms	3	1	0	4	PC
20MSS54	Machine Learning	3	0	0	3	PC
	Elective I	3	0	0	3	PC
	PRACTICALS					
20MSS55	Full Stack Application Development Laboratory	0	0	4	2	PC
20MSS56	Network Programming Laboratory	0	0	4	2	PC
	Elective Laboratory I	0	0	4	2	PC
20MSS57	Communications Skills	0	0	2	1	EEC
	TOTAL CREDITS				**23**	

Semester VI

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS61	Software Testing and Quality Assurance	3	0	0	3	PC
20MSS62	Mobile Computing	3	0	0	3	PC
20MSS63	Cloud Computing	3	0	0	3	PC
20MSS64	Software Architecture	3	0	0	3	PC
	Elective II	3	0	0	3	PC
	PRACTICALS					
20MSS65	Software Engineering Laboratory	0	0	4	2	PC
20MSS66	Cloud and Mobile Application Development Lab	0	0	4	2	PC
	Elective Laboratory II	0	0	4	2	PC
20MSS67	Hackathon	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester VII

Course Code	Course Name	L	T	P	C	CAT
20MSS71	Project Work and Viva Voce-I	0	0	0	18	EEC

Semester VIII

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS81	Software Project Management	3	0	0	3	PC
20MSS82	Smart Sensors and Internet of Things	3	0	0	3	PC
20MSS83	Artificial Intelligence	3	0	0	3	PC
	Elective III	3	0	0	3	PC
	Elective IV	3	0	0	3	PC
	PRACTICALS					
20MSS84	Internet of Things Laboratory	0	0	4	2	PC
20MSS85	Artificial Intelligence Laboratory	0	0	4	2	PC
	Elective Laboratory III	0	0	4	2	PC
	TOTAL CREDITS				**21**	

Semester IX

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS91	Agile Methods for Software Development	3	0	0	3	PC
20MSS92	Information Security	3	0	0	3	PC
20MSS93	Professional Ethics	3	0	0	3	EEC
	Elective V	3	0	0	3	PC
	Elective VI	3	0	0	3	PC
	PRACTICALS					
20MSS94	Information Security Laboratory	0	0	4	2	PC
	Elective Laboratory IV	0	0	4	2	PC
	Elective Laboratory V	0	0	4	2	PC
	TOTAL CREDITS				**21**	

Semester X

Course Code	Course Name	L	T	P	C	CAT
20MSS10	Project Work and Viva Voce-II	0	0	0	18	EEC
	TOTAL CREDITS				**18**	
	GRAND TOTAL OF CREDITS				**212**	

Coimbatore Institute of Technology, Coimbatore - 14.

(Government Aided Autonomous Institution Affiliated to Anna University)

Department of Computing

M. Sc. DATA SCIENCE

CHOICE BASED CREDIT SYSTEM

Five year Integrated Programme

Curriculum for the Academic Year 2021 – 2026

Semester 1

Subject code	Name of the Subject	L	T	P	C	CAT
	THEORY					
21MDS11	Technical English	2	0	0	2	HS
21MDS12	Algebra and Applications	3	1	0	4	BS
21MDS13	Statistical Methods	3	0	0	3	PC
21MDS14	Problem Solving and Programming in Python	3	0	0	3	PC
21MDS15	Principles of Digital Electronics	3	0	0	3	PC
	PRACTICALS					
21MDS16	Computing Laboratory I	0	0	4	2	PC
21MDS17	Programming Laboratory in Python	0	0	4	2	PC
21MDS18	Digital Electronics Laboratory	0	0	4	2	PC
21MDS19	English for Employability	0	0	2	1	EEC
	Total Credits				**22**	

Semester 2

Subject code	Name of the Subject	L	T	P	C	CAT
	THEORY					
21MDSLE01	Language Elective	2	0	0	2	HS

Subject code	Subject Name	L	T	P	C	CAT
21MDS21	Calculus and Applications	3	1	0	4	BS
21MDS22	Probability Distributions and Applications	3	0	0	3	PC
21MDS23	Data Structures and Algorithms I	3	0	0	3	PC
21MDS24	Object Oriented Programming	3	0	0	3	PC
	PRACTICALS					
21MDS25	Computing Laboratory II	0	0	4	2	PC
21MDS26	Data Structures and Algorithms Laboratory I	0	0	4	2	PC
21MDS27	Object Oriented Programming Laboratory	0	0	4	2	PC
21MDS28	Employability Skills	0	0	2	1	EEC
	Total Credits				**22**	

Semester 3

Subject code	Subject Name	L	T	P	C	CAT
	THEORY					
21MDS31	Business Statistics	3	0	0	3	PC
21MDS32	Discrete Structures and Automata Theory	3	0	0	3	PC
21MDS33	Operating Systems	3	0	0	3	PC
21MDS34	Database Systems	3	0	0	3	PC
21MDS35	Data Structures and Algorithms II	3	0	0	3	PC
	PRACTICALS					
21MDS36	Database Systems Laboratory	0	0	4	2	PC
21MDS37	Data Structures and Algorithms Laboratory II	0	0	4	2	PC
21MDS38	Web Technology Framework Laboratory	0	0	4	2	PC
	Total Credits				**21**	

Semester 4

Subject code	Subject Name	L	T	P	C	CAT
	THEORY					

Subject code	Subject Name	L	T	P	C	CAT
21MDS41	Multivariate Data Analysis	3	0	0	3	PC
21MDS42	Graph Theory	3	0	0	3	PC
21MDS43	Design and Analysis of Algorithms	3	0	0	3	PC
21MDS44	Computer Networks	3	0	0	3	PC
21MDS45	Machine Learning	3	0	0	3	PC
	PRACTICALS					
21MDS46	Predictive Analytics Laboratory	0	0	4	2	PC
21MDS47	Design and Analysis of Algorithms Laboratory	0	0	4	2	PC
21MDS48	Machine Learning Laboratory	0	0	4	2	PC
21MDS49	Personality Development	0	0	2	1	EEC
	Total Credits				**22**	

Semester 5

Subject code	Subject Name	L	T	P	C	CAT
	THEORY					
21MDS51	Operations Research	3	0	0	3	PC
21MDS52	Deep Learning	3	0	0	3	PC
21MDS53	Big Data Computing	3	0	0	3	PC
21MDS54	Artificial Intelligence	3	0	0	3	PC
	Elective - I	3	0	0	3	PE
	PRACTICALS					
21MDS55	Deep Learning Laboratory	0	0	4	2	PC
21MDS56	Big Data Computing Laboratory	0	0	4	2	PC
	Elective Lab - I	0	0	4	2	PE
21MDS57	Communication Skills	0	0	2	1	EEC
	Total Credits				**22**	

Semester 6

Subject code	Subject Name	L	T	P	C	CAT
	THEORY					
21MDS61	Stochastic Models	3	0	0	3	PC
21MDS62	Cloud Computing	3	0	0	3	PC
21MDS63	Data Mining	3	0	0	3	PC
21MDS64	Software Engineering	3	0	0	3	PC
	Elective- II	3	0	0	3	PE
	PRACTICALS					
21MDS65	Cloud Computing Laboratory	0	0	4	2	PC
21MDS66	Data Mining and Visualization Laboratory	0	0	4	2	PC
	Elective Lab - II	0	0	4	2	PE
21MDS67	Hackathon	0	0	2	1	EEC
	Total Credits				**22**	

Semester 7

Subject code	Subject Name	L	T	P	C	CAT
21MDS71	Project Work and Viva Voce-I	0	0	0	18	EEC
	Total Credits				**18**	

Semester 8

Subject code	Subject Name	L	T	P	C	CAT
	THEORY					
21MDS81	Data Privacy and Security Analytics	3	0	0	3	PC
21MDS82	Quantum Machine Learning	3	0	0	3	PC
21MDS83	Ethics in Data Science	3	0	0	3	PC

	Elective - III	3	0	0	3	PE
	Elective - IV	3	0	0	3	PE
	PRACTICALS					
21MDS84	Data Privacy and Security Analytics Laboratory	0	0	4	2	PC
21MDS85	Quantum Machine Learning Laboratory	0	0	4	2	PC
	Elective Lab - III	0	0	4	2	PE
	Total Credits				**21**	

Semester 9

Subject code	Subject Name	L	T	P	C	CAT
	THEORY					
21MDS91	Econometric Analysis	3	1	0	4	PC
21MDS92	Web Analytics	3	0	0	3	PC
21MDS93	Healthcare Analytics	3	1	0	4	PC
	Elective - V	3	0	0	3	PE
	Elective - VI	3	0	0	3	PE
	PRACTICALS					
21MDS94	Econometric Analysis Laboratory	0	0	4	2	PE
21MDS95	Web Analytics Laboratory	0	0	4	2	PE
	Elective Lab - IV	0	0	4	2	PE
	Total Credits				**23**	

Semester 10

Subject code	Subject Name	L	T	P	C	CAT
21MDS101	Project Work and Viva Voce- II	0	0	0	18	EEC
	Total Credits				**18**	
Grand Total of Credits					**211**	

	Coimbatore Institute of Technology, Coimbatore - 14					
	Department of Computing					
	M. Sc. DECISION AND COMPUTING SCIENCES					
	(Five year Integrated Programme)					
	Curriculum from the Academic Year 2022 − 2023 onwards					
Semester I						
Course Code	**Course Name**	**L**	**T**	**P**	**C**	**CAT**
Theory						
22MDC11	Technical English	2	0	1	2	HS
22MDC12	Applied Algebra and Calculus	3	1	0	4	BS
22MDC13	Statistical Methods	3	0	0	3	BS
22MDC14	Principles of Management	3	0	0	3	PC
22MDC15	Problem Solving and Programming in C	3	0	0	3	PC
Practicals						
22MDC16	Mathematical and Statistical Computing Laboratory	0	0	4	2	PC
22MDC17	C Programming Laboratory	0	0	4	2	PC
22MDC18	Foundations of Computer Science Laboratory	0	0	4	2	PC
22MDC19	Employability Skills	0	0	2	1	EEC
	Total Credits				**22**	
Semester II						
Course Code	**Course Name**	**L**	**T**	**P**	**C**	**CAT**
Theory						
	Language Elective	2	0	1	2	HS
22MDC21	Probability Distributions and Applications	3	0	0	3	BS
22MDC22	Organisational Behavior	4	0	0	4	PC
22MDC23	Data Structures and Algorithms	3	0	0	3	PC
22MDC24	Computer Organization and Operating Systems	3	0	0	3	PC
Practicals						
22MDC25	Applied Probability Laboratory	0	0	4	2	PC
22MDC26	Data Structures and Algorithms Laboratory	0	0	4	2	PC
22MDC27	Python Programming Laboratory	0	0	4	2	PC
22MDC28	English for Employability	0	0	2	1	EEC
	Total Credits				**22**	

Curriculum and Syllabi
Semesters III - X and Electives

Semester III

Course Code	Course Name	L	T	P	C	Category
	THEORY					
22MDC31	Applied Statistics for Business Decisions	3	1	0	4	BS
22MDC32	Financial Analysis and Reporting	3	1	0	4	PC
22MDC33	Digital Marketing	3	0	0	3	PC
22MDC34	Database Management Systems	3	0	0	3	PC
22MDC35	Object Oriented Programming	3	0	0	3	PC
	PRACTICALS					
22MDC36	Digital Marketing Laboratory	0	0	4	2	PC
22MDC37	Database Management Systems Laboratory	0	0	4	2	PC
22MDC38	Object Oriented Programming Laboratory	0	0	4	2	PC
	Total Credits				**23**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
	THEORY					
22MDC41	Predictive Analytics	3	0	0	3	BS
22MDC42	Operations Research for Business	3	1	0	4	PC
22MDC43	Financial Engineering	3	0	0	3	PC
22MDC44	Advanced Data Structures and Algorithms	3	0	0	3	PC

22MDC45	Artificial Intelligence	3	0	0	3	PC
	PRACTICALS					
22MDC46	Predictive Analytics Laboratory	0	0	4	2	PC
22MDC47	Financial Engineering Laboratory	0	0	4	2	PC
22MDC48	Advanced Data Structures and Algorithms Laboratory	0	0	4	2	PC
22MDC49	Personality Development	0	0	2	1	EEC
	Total Credits				**23**	

Semester V

Course Code	Course Name	L	T	P	C	Category
	THEORY					
22MDC51	Human Resource Management and Analytics	3	1	0	4	PC
22MDC52	Software Engineering	3	0	0	3	PC
22MDC53	Computer Networks	3	0	0	3	PC
22MDC54	Machine Learning	3	0	0	3	PC
	Elective - I	3	0	0	3	PE
	PRACTICALS					
22MDC55	Full Stack Application Development lab	0	0	4	2	PC
22MDC56	Machine Learning Laboratory	0	0	4	2	PC
	Elective Laboratory - I	0	0	4	2	PE
22MDC57	Managerial Communication Skills	0	0	2	1	EEC
	Total Credits				**23**	

Semester VI

Course Code	Course Name	L	T	P	C	Category
	THEORY					
22MDC61	Economic Foundations of Business	3	0	0	3	PC
22MDC62	Systems for Decision Support	3	0	0	3	PC
22MDC63	Cloud Computing	3	0	0	3	PC
22MDC64	Deep Learning	3	0	0	3	PC

Semester V

		L	T	P	C	
	Elective - II	3	0	0	3	PE
	PRACTICALS					
22MDC65	Cloud and Mobile Application Development Laboratory	0	0	4	2	PC
22MDC66	Deep Learning Laboratory	0	0	4	2	PC
	Elective Laboratory - II	0	0	4	2	PE
22MDC67	Hackathon	0	0	2	1	EEC
	Total Credits				**22**	

Semester VII

Course Code	Course Name	L	T	P	C	Category
22MDC71	Project Work and Viva Voce-I	0	0	0	18	EEC
	Total Credits				**18**	

Course Code	Course Name	L	T	P	C	Category
	THEORY					
22MDC81	Modelling and Simulation	3	0	0	3	PC
22MDC82	Game Theory and Decision Analysis	3	0	0	3	PC
22MDC83	Production and Operations Management	3	0	0	3	PC
	Elective – III	3	0	0	3	PE
	Elective – IV	3	0	0	3	PE
	PRACTICALS					
22MDC84	Game Theory and Decision Analysis Laboratory	0	0	4	2	EEC
22MDC85	Minor Project (Decision Tool Development)	0	0	4	2	PC
	Elective Laboratory - III	0	0	4	2	PE
	Total Credits				**21**	

Semester IX

Course Code	Course Name	L	T	P	C	Category
	THEORY					
22MDC91	Project Management	3	0	0	3	PC
22MDC92	Business Ethics and Entrepreneurship Development	3	0	0	3	PC
22MDC93	Data Privacy and Security Analytics	3	0	0	3	PC
	Elective – V	3	0	0	3	PE
	Elective – VI	3	0	0	3	PE
	PRACTICALS					
22MDC94	Data Privacy and Security Analytics Laboratory	0	0	4	2	PC

	Course Name	L	T	P	C	Category
	Elective Laboratory IV	0	0	4	2	EEC
	Elective Laboratory V	0	0	4	2	
	Total Credits				**21**	

Semester X

Course Code	Course Name	L	T	P	C	Category
22MDC101	Project Work and Viva Voce- II	0	0	0	18	EEC
	Total Credits				**18**	

ELECTIVE COURSE

Course Code	Course Name	L	T	P	C	Category
	MANAGEMENT STREAM					
	General Management					
22MDCE01	Business Process Management	3	0	0	3	PE
22MDCE02	Business Environment	3	0	0	3	PE
22MDCE03	Legal Aspects of Business	3	0	0	3	PE
22MDCE04	Strategic Management	3	0	0	3	PE
22MDCE05	Technology and Innovation Management	3	0	0	3	PE
	Finance					

22MDCE11	Equity Valuation	3	0	0	3	PE
22MDCE12	Credit Risk Analytics and Management	3	0	0	3	PE
22MDCE13	International Financial Management	3	0	0	3	PE
	Marketing					
22MDCE21	Customer Relationship Management	3	0	0	3	PE
22MDCE22	Brand Management	3	0	0	3	PE
22MDCE23	Marketing Analytics	3	0	0	3	PE
	Human Resources					
22MDCE31	Strategic Human Resource Management	3	0	0	3	PE
22MDCE32	Performance Management	3	0	0	3	PE
22MDCE33	Compensation Management	3	0	0	3	PE
	Operations & Logistics					
22MDCE41	Total Quality Management	3	0	0	3	PE
22MDCE42	Logistics Strategy and Planning	3	0	0	3	PE
22MDCE43	Supply Chain Management	3	0	0	3	PE
	COMPUTER SCIENCE STREAM					
	Advanced Analytics and Intelligent Systems					
22MDCE51	Graph Theory for Data Science	3	0	0	3	PE
22MDCE52	Healthcare Analytics	3	0	0	3	PE

22MDCE53	Social Network Analysis	3	0	0	3	PE
22MDCE54	Natural Language Processing	3	0	0	3	PE
	Distributed and Network Systems					
22MDCE61	Blockchain Technologies	3	0	0	3	PE
22MDCE62	Distributed Computing	3	0	0	3	PE
22MDCE63	Embedded Systems	3	0	0	3	PE
22MDCE64	Sensing and Sensors	3	0	0	3	PE
22MDCE65	Internet of Things	3	0	0	3	PE
	Software Engineering					
22MDCE71	Software Testing and Quality Assurance	3	0	0	3	PE
22MDCE72	Human Computer Interaction and Interface	3	0	0	3	PE
22MDCE73	Software Architecture and Design Patterns	3	0	0	3	PE
	Cyber Security					
22MDCE81	Cyber Security Analytics	3	0	0	3	PE
22MDCE82	Digital Forensics	3	0	0	3	PE
	Professional Electives - Laboratory Courses					
22MDCEL1	Business Intelligence Laboratory	0	0	4	2	PE
22MDCEL2	Natural Language Processing Laboratory	0	0	4	2	PE
22MDCEL3	Computational Intelligence Laboratory	0	0	4	2	PE

22MDCEL4	Software Engineering Laboratory	0	0	4	2	PE
22MDCEL5	Internet of Things Laboratory	0	0	4	2	PE

HS - Humanities and Social Sciences, BS - Basic Sciences, PC - Professional Core, PE - Professional Elective, EEC - Employability Enhancement Course.

NOTE :

- Equal weightage for Decision Science and Computer Science is given in the design of the curriculum, which complement each other to address the industry needs.
- Students of this Programme can specialize in Decision Science and/or Computing Science by choosing interested elective courses given under different streams.

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTING - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

M.Sc. ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

(Five-Year Integrated Programme)

Course Code	Course Name	L	T	P	C	CAT
19MAM11	Technical English	2	0	0	2	HS
19MAM12	Applied Algebra	3	0	0	3	BS
19MAM13	Fundamental Statistical Methods	3	0	0	3	BS
19MAM14	Data Structures	3	0	0	3	PC
19MAM15	Theory of Programming Languages	3	0	0	3	PC
	PRACTICALS					
19MAM16	Algebra and Statistics Lab	0	0	4	2	PC
19MAM17	Data Structures Lab	0	0	4	2	PC
19MAM18	Python Programming Lab	1	0	4	3	PC
19FYEL11	Employability Skills	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Course Code	Course Name	L	T	P	C	CAT
19MAMLE01	Professional English	2	0	0	2	HS
19MAM21	Applied Calculus	3	0	0	3	BS
19MAM22	Probability Distributions and Applications	3	0	0	3	BS
19MAM23	Computer System Architecture	3	0	0	3	PC
19MAM24	Advanced Data Structures	3	0	0	3	PC
	PRACTICALS					
19MAM25	Calculus and Probability Lab	0	0	4	2	PC
19MAM26	Programming Paradigm Lab	0	0	4	2	PC
19MAM27	Advanced Data Structures Lab	0	0	4	2	PC
19FYEL21	English for Employability	0	0	2	1	EEC
	TOTAL CREDITS				**21**	

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
19MAM31	Artificial Intelligence	3	0	0	3	PC
19MAM32	Theory of Computing	3	0	0	3	PC
19MAM33	Database Management Systems	3	0	0	3	PC
19MAM34	Predictive Analytics	3	0	0	3	BS
19MAM35	Human Computer Interaction	3	1	0	4	PC
	PRACTICALS					
19MAM36	Artificial Intelligence Lab	0	0	4	2	PC
19MAM37	Database Management Systems Lab	0	0	4	2	PC
19MAM38	Predictive Analytics Lab	0	0	4	2	PC
	TOTAL CREDITS				**22**	

Semester IV

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
19MAM41	Operations Research	3	0	0	3	BS
19MAM42	Machine Learning	3	0	0	3	PC
19MAM43	Design and Analysis of Algorithms	3	0	0	3	PC
19MAM44	Data Communications and Networking	3	0	0	3	PC
19MAM45	Operating Systems	3	0	0	3	PC
	PRACTICALS					
19MAM46	Machine Learning Lab	0	0	4	2	PC
19MAM47	Design and Analysis of Algorithms Lab	0	0	4	2	PC
19MAM48	Network Programming Lab	0	0	4	2	PC
	TOTAL CREDITS				**21**	

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
19MAM51	Advanced Machine Learning	3	0	0	3	PC
19MAM52	Artificial Neural Networks	3	0	0	3	PC
19MAM53	Knowledge Based Systems	3	0	0	3	PC
19MAM54	AI Systems Engineering	3	0	0	3	PC
19MAM55	Distributed and Cloud Computing	3	0	0	3	PC
	PRACTICALS					
19MAM56	Advanced Machine Learning Lab	0	0	4	2	PC
19MAM57	Full Stack Web Development Lab	0	0	4	2	PC
19MAM58	Cloud Computing Lab	0	0	4	2	PC
19MAM59	Personality Development	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
19MAM61	Intelligent Agents	3	0	0	3	PC
19MAM62	Deep Learning	3	0	0	3	PC
19MAM63	Information Retrieval and Web Search	3	0	0	3	PC
19MAM64	Big Data Analytics	3	0	0	3	PC
	Elective - I	3	0	0	3	PE
	PRACTICALS					
19MAM65	Deep Learning Lab	0	0	4	2	PC
19MAM66	Mobile Application Development Lab	0	0	4	2	PC
19MAM67	Big Data Analytics Lab	0	0	4	2	PC
19MAM68	Communication Skills	0	0	2	1	EEC
19MAM69	Hackathon	0	0	2	1	EEC
	TOTAL CREDITS				**23**	

Semester VII

Course Code	Course Name	L	T	P	C	CAT
19MAM71	Project Work and Viva Voce - I	0	0	0	18	EEC
	TOTAL CREDITS				**18**	

Semester VIII

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
19MAM81	Graph Representation Learning	3	0	0	3	PC
19MAM82	Reinforcement Learning	3	0	2	4	PC
19MAM83	Meta-Heuristic Optimization Techniques	3	0	0	3	PC
	Elective II	3	0	0	3	PE
	Elective III	3	0	0	3	PE
	PRACTICALS					
19MAM84	Meta-Heuristic Optimization Lab	0	0	4	2	PC
	Elective Lab I	0	0	4	2	PE
	Elective Lab II	0	0	4	2	PE
	TOTAL CREDITS				**22**	

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
19MAM91	Computer Vision	3	0	0	3	PC
19MAM92	Cyber Threat Intelligence	3	0	0	3	PC
	Elective - IV	3	0	0	3	PE
	Elective - V	3	0	0	3	PE
	Elective - VI	3	0	0	3	PE
	PRACTICALS					
19MAM93	Computer Vision Lab	0	0	4	2	PC
19MAM94	Intelligent Cyber Security Lab	0	0	4	2	PC
	Elective Lab - III	0	0	4	2	PE
	TOTAL CREDITS				**21**	

Semester X

Course Code	Course Name	L	T	P	C	CAT
19MAM101	Project Work and Viva Voce - II	0	0	0	18	EEC
	Total Credits				**18**	
	Grand Total of Credits				**210**	

PROFESSIONAL ELECTIVES - AI & ML

Course Code	Course Name	L	T	P	C	CAT
19MAME01	Ethics in AI	3	0	0	3	PE
19MAME02	Healthcare Analytics	2	0	2	3	PE
19MAME03	Smart Applications	3	0	0	3	PE
19MAME04	Spatial Data Modelling and Analysis	3	0	0	3	PE
19MAME05	Augmented and Virtual Reality	3	0	0	3	PE
19MAME06	Medical Image Processing	3	0	0	3	PE
19MAME07	Natural Language Processing	3	0	0	3	PE
19MAME08	Probabilistic Graphical Models	2	0	2	3	PE
19MAME09	Cognitive Computing	3	0	0	3	PE
19MAME10	Recommender Systems	2	0	2	3	PE
19MAME11	Robotics and its Applications	3	0	0	3	PE
19MAME12	Conversational AI	3	0	0	3	PE
19MAME13	Game Theory	3	0	0	3	PE

PROFESSIONAL ELECTIVES-INFORMATION TECHNOLOGY

Course Code	Course Name	L	T	P	C	CAT
19MAME14	Agile Software Development	3	0	0	3	PE
19MAME15	SOA and Web Services	2	0	2	3	PE
19MAME16	Internet of Things	3	0	0	3	PE
19MAME17	Digital Signal and Image Processing	2	0	2	3	PE
19MAME18	Cyber Security	3	0	0	3	PE

PROFESSIONAL ELECTIVES - ECONOMICS, FINANCE AND MANAGEMENT

Course Code	Course Name	L	T	P	C	CAT
19MAME19	Business Intelligence	3	0	0	3	PE

PROFESSIONAL ELECTIVES - LABORATORY

Course Code	Course Name	L	T	P	C	CAT
19MAMEL01	Spatial Data Modelling and Analysis Laboratory	0	0	4	2	PE
19MAMEL02	Augmented and Virtual Reality Lab	0	0	4	2	PE
19MAMEL03	Natural Language Processing Lab	0	0	4	2	PE
19MAMEL04	Graph Analytics Lab	0	0	4	2	PE
19MAMEL05	Internet of Things Lab	0	0	4	2	PE
19MAMEL06	Cyber Security Lab	0	0	4	2	PE

ONE CREDIT COURSES**

Course Code	Course Name	L	T	P	C	CAT
19MAMOC01	Econometrics and Machine Learning in Finance	1	0	0	1	EEC
19MAMOC02	Java Programming	0	0	2	1	EEC

**Over and above the CGPA

Advanced Data Structures and Algorithms Laboratory

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

MASTER OF COMPUTER APPLICATIONS

UNDER CHOICE BASED CREDIT SYSTEM

Curriculum from the Academic Year 2018 - 2019 onwards

Semester I

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA11	Theory of Computing	3	0	0	3	FC
18MCA12	Data Structures	3	0	0	3	FC
18MCA13	Programming in C	3	0	0	3	PC
18MCA14	Computer Organization	3	0	0	3	FC
18MCA15	Probability and Statistics	3	0	0	3	PC
	PRACTICALS					
18MCA16	C Programming Laboratory	0	0	4	2	PC
18MCA17	User Experience Laboratory	0	0	4	2	FC
18MCA18	Statistics Laboratory	0	0	4	2	FC
18MCA19	Communication Skills	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester II

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA21	Design and Analysis of Algorithms	3	0	0	3	FC
18MCA22	Object Oriented Principles and Programming in JAVA	3	0	0	3	PC
18MCA23	Principles of Operating System	3	0	0	3	PC
18MCA24	Database Management Systems	3	0	0	3	PC
18MCA25	Software Engineering	3	0	0	3	PC
	PRACTICAL					
18MCA26	Algorithms and Operating Systems Laboratory	0	0	4	2	PC
18MCA27	Object Oriented Programming Laboratory	0	0	4	2	PC
18MCA28	RDBMS Laboratory	0	0	4	2	PC
18MCA29	Professional English	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester III

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA31	Numerical Methods and Applied Statistics	4	0	0	4	FC
18MCA32	Computer Networks	3	0	0	3	PC
18MCA33	Artificial Intelligence	3	0	0	3	PC
18MCA34	SOA and Web Services	3	0	0	3	PC
	Elective I	3	0	0	3	PE
	PRACTICAL					
18MCA35	Advanced Programming Laboratory	0	0	4	2	PC
18MCA36	Artificial Intelligence Laboratory	0	0	4	2	PC
18MCA37	Network Programming Laboratory	0	0	4	2	PC
18MCA38*	Personality Development					EEC
	TOTAL CREDITS				**22**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA41	Operations Research	4	0	0	4	FC
18MCA42	Data Mining and Warehousing	3	0	0	3	PC
18MCA43	Accounting and Financial Management	4	0	0	4	PC
	Elective II	3	0	0	3	PE
	Elective III	3	0	0	3	PE
	PRACTICAL					
18MCA44	Data Mining Laboratory	0	0	4	2	PC
	Elective Laboratory	0	0	4	2	PE
18MCA45	Mini Project	0	0	4	2	EEC
	TOTAL CREDITS				**23**	

Semester V

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA51	Software Testing and Quality Assurance	3	0	0	3	PC
18MCA52	Cryptography and Network Security	3	0	0	3	PC
	Elective IV	3	0	0	3	PE
	Elective V	3	0	0	3	PE
	Elective VI	3	0	0	3	PE
	PRACTICAL					
18MCA53	Software Testing Laboratory	0	0	4	2	PC
18MCA54	Information Security Laboratory	0	0	4	2	PC
18MCA55*	Professional Ethics					EEC
	TOTAL CREDITS				**19**	

Semester VI

Course Code	Course Name	L	T	P	C	Category
18MCA61	Project work and Viva voce				18	EEC
	TOTAL CREDITS				**18**	

TOTAL = 126

OPEN ELECTIVES OFFERED

Course Code	Course Name	L	T	P	C	Category
18MCAOE01	Accounting and Financial Management	3	0	0	3	OE
18MCAOE02	Basics of Java Programming	3	0	0	3	OE
18MCAOE03	C# and Dot Net Programming	3	0	0	3	OE
18MCAOE04	Python Programming	3	0	0	3	OE
18MCAOE05	Data Mining and Warehousing	3	0	0	3	OE
18MCAOE06	Natural Language Processing	3	0	0	3	OE
18MCAOE07	Social Network Analysis	3	0	0	3	OE

* Pass is required

\#   FC - Foundation Course, PC - Professional Core, PE - Professional Elective, EEC - Employability Enhancement Course.

CURRICULUM

M.E- ADVANCED MANUFACTURING TECHNOLOGY

S.No	COURSE CODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	T	P	
SEMESTER – I						
1.	19MMA11	Applied Numerical Analysis	3	0	0	3
2.	19MMA12	Mechatronics in Manufacturing Systems	3	0	0	3
3.	19MMA13	Computer Integrated Manufacturing	3	0	0	3
4.	19MMA14	Optimization for Engineering Applications	3	0	0	3
5.	19MMA15	Advanced Material Engineering	3	0	0	3
6.		Professional Elective – I	3	0	0	3
7.	19MMA17	CIM Laboratory & MechatronicsLaboratory	0	0	4	2
		Total Credits:	**18**		**4**	**20**

S.No	COURSE CODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	T	P	
SEMESTER – II						
1	19MMA21	Design for Manufacture and Assembly	3	0	0	3
2	19MMA22	Advanced Metal Joining Technology	3	0	0	3
	19MMA23	Finite Element Analysis in ManufacturingEngineering	3	0	0	3
3		Professional Elective – II	3	0	0	3
4		Professional Elective – III	3	0	0	3
		Professional Elective – IV	3	0	0	3
5	19MMA27	Simulation Laboratory & WeldingLaboratory	0	0	4	2
8		Mini project / Industrial Training / Employability Enhancement Courses	0	0	4	2
		Total Credits:	**18**		**8**	**22**

M.E- ADVANCED MANUFACTURING TECHNOLOGY

SEMESTER – III						
S.No	COURSE CODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	T	P	
1		Professional Elective - IV	3	0	0	3
2		Professional Elective -V	3	0	0	3
		Open Elective / Professional Elective	3	0	0	3
3	19MMA41	Project Work and Viva Voce	0	0	0	0
		Total Credits:	9			9

SEMESTER – IV						
S.No	COURSE CODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	T	P	
1	19MMA41	Project Work and Viva Voce	0	0	0	18
		Total Credits:				18

TOTAL CREDITS FOR THE PROGRAMME = 20 + 22 + 9 + 18 = 69

M.E- ADVANCED MANUFACTURING TECHNOLOGY

			TEACHING SCHEME			CREDITS
Sl.no	**COURS ECODE**	**COURSE TITLE**	**L**	**T**	**P**	**C**
1.	19MMAE 01	Design of Hydraulic and Pneumatic system	3	0	0	3
2.	19MMAE 02	Optimization Techniques in Manufacturing	3	0	0	3
3.	19MMAE 03	Advanced Operations Research	3	0	0	3
4.	19MMAE 04	Industrial Robotics and Machine Vision	3	0	0	3
5.	19MMAE 05	Manufacturing Information systems	3	0	0	3
6.	19MMAE 06	Supply Chain Management	3	0	0	3
7.	19MMAE 07	Advanced Metrology and Non - Destructive testing	3	0	0	3
8.	19MMAE 08	Productivity Management and Re-Engineering	3	0	0	3
9.	19MMAE 09	Supply chain Information systems	3	0	0	3
10.	19MMAE 10	Additive Manufacturing	3	0	0	3
11.	19MMAE 11	Advances in Casting and Welding	3	0	0	3
12.	19MMAE 12	Product Design and Development	3	0	0	3
13.	19MMAE 13	Computer Aided Process Planning	3	0	0	3
14.	19MMAE 14	Advanced Manufacturing Planning and Control	3	0	0	3
15.	19MMAE 15	Flexible competitive manufacturing system	3	0	0	3
16.	19MMAE 16	Corrosion and Surface engineering	3	0	0	3
17.	19MMAE 17	Advanced Tool Engineering and Design	3	0	0	3
18.	19MMAE 18	Total Quality Systems and Engineering	3	0	0	3
19.	19MMAE 19	Plastics and Composite Materials	3	0	0	3
20.	19MMAE 20	Advances in Foundry Technology	3	0	0	3
21.	19MMAE 21	Advanced Agile and Lean Manufacturing Systems	3	0	0	3
22.	19MMAE 22	Advanced Biomaterials	3	0	0	3
23.	19MMAE 23	Concepts and Analysis of Robot Manipulators	4	0	0	4
24.	19MMAE 24	Smart Materials and Systems	3	0	0	3
25.	19MMAE 25	Ultrasonic and Applications	3	0	0	3
26.	19MMAE 26	Vibration Analysis and Control	3	0	0	3
27.	19MMAE 27	Design of Experiments and Taguchi Methods	3	0	0	3
28.	19MMAE 28	Metal Cutting Theory and Practice	3	0	0	3
29.	19MMAE 29	Automotive Suspension and System Dynamics	3	0	0	3
30.	19MMAE 30	Design and Analysis of Experiments	3	0	0	3

LIST OF PROFESSIONAL ELECTIVES

M.E- ADVANCED MANUFACTURING TECHNOLOGY

	LIST OF OPEN ELECTIVES TO OTHER DEPARTMENTS					
S. No	**COURSE CODE**	**COURSE NAME**	**TEACHING SCHEME**			**CREDITS**
			L	**T**	**P**	
1.	OE01	Automation and Robotics	3	0	0	3
2.	OE02	Work Study and Ergonomics	3	0	0	3
3.	OE03	Product Life Cycle Management	3	0	0	3
4.	OE04	IoT in Manufacturing	3	0	0	3
5.	OE05	Artificial Intelligence and Machine Learning in Design and Manufacturing	3	0	0	3
6.	OE06	Research Methodology and IPR	3	0	0	3

	LIST OF EMPLOYABILITY ENHANCEMENT COURSE					
S.No	**COURSE CODE**	**COURSE NAME**	**TEACHING SCHEME**			**CREDITS**
			L	**T**	**P**	
1.	19MMA 41	Project Work and Viva Voce	-	-	-	18
2.	EEC01	English for Research Paper Writing	0	0	4	2
3.	EEC02	Constitution of India	0	0	4	2
4.	EEC03	Pedagogy Studies	0	0	4	2
5.	EEC04	Personality and skill Development	0	0	4	2
6.	EEC05	Python Programming	0	0	4	2
7.	EEC06	Intellectual Property Rights and Patents	0	0	4	2
8.	EEC07	Study of Indian Economy	0	0	4	2
9.	EEC08	Seminar and term paper writing	0	0	4	2

		M.E- HEAT POWER ENGINEERING				
SEMESTER – I						
S.No	**COURS ECODE**	**COURSE NAME**	**TEACHING SCHEME**			**CREDITS**
			L	**T**	**P**	
1	19MMH11	Applied Mathematics for Mechanical Engineers	3	0	0	3
2	19MMH12	Advanced Thermodynamics	3	0	0	3
3	19MMH13	Incompressible Flow	3	0	0	3
4	19MMH14	Energy Conservation and Energy Audit	3	0	0	3
5	19MMH15	Turbo machinery	3	0	0	3
6		Professional Elective - I	3	0	0	3
7	19MMH17	Thermodynamics Laboratory	0	0	4	2
		Total Credits:	18	0	4	20

		M.E- HEAT POWER ENGINEERING				
SEMESTER – II						
S.No	COURS ECODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	T	P	
1	19MMH21	Conduction Heat Transfer	3	0	0	3
2	19MMH22	Convective Heat Transfer	3	0	0	3
3	19MMH23	Design of Heat Exchangers	3	0	0	3
4		Professional Elective - II	3	0	0	3
5		Professional Elective - III	3	0	0	3
6		Professional Elective - IV	3	0	0	3
7	19MMH27	Heat Transfer Laboratory	0	0	4	2
8		Employability Enhancement Course (EEC-I)	0	0	4	2
		Total Credits:	**18**	**0**	**08**	**22**

M.E- HEAT POWER ENGINEERING

SEMESTER – III

S.No	COURSE CODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	T	P	
1		Professional Elective V	3	0	0	3
2		Professional Elective VI	3	0	0	3
3		Open Elective/Professional Elective VII	3	0	0	3
4	19MMH41	Project Work and Viva Voce	0	0	0	0
		Total Credits:	**9**	**0**	**0**	**9**

M.E- HEAT POWER ENGINEERING

SEMESTER – IV

S.No	COURSE CODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	T	P	
1	19MMH41	Project Work and Viva voce	0	0	0	18
		Total Credits:	**0**	**0**	**0**	**18**

TOTAL CREDITS FOR THE PROGRAMME = 20+22+09+18 = 69

S.No	COURSE CODE	COURSE NAME	TEACHING SCHEME			CREDITS
			L	**T**	**P**	
		M.E- HEAT POWER ENGINEERING				
		LIST OF PROFESSIONAL ELECTIVE				
1	19MMHE01	Advanced Internal Combustion Engines	3	0	0	3
2	19MMHE02	Refrigeration & Air-Conditioning	3	0	0	3
3	19MMHE03	Solar Energy Utilization & TER	3	0	0	3
4	19MMHE04	Turbulent Flows	3	0	0	3
5	19MMHE05	Numerical Methods in Heat Transfer & Fluid Flow	3	0	0	3
6	19MMHE06	Compressible Flow	3	0	0	3
7	19MMHE07	Finite Element Methods in Thermal Engineering	3	0	0	3
8	19MMHE08	Radiation Heat Transfer	3	0	0	3
9	19MMHE09	Design & Optimization of Thermal Equipment	3	0	0	3
10	19MMHE10	Thermal Measurements and Process Control	3	0	0	3
11	19MMHE11	Thermal Storage Systems	3	0	0	3
12	19MMHE12	Hybrid Vehicles	3	0	0	3
13	19MMHE13	Materials for Thermal Engineering	3	0	0	3
14	19MMHE14	Alternative Energy Resources	3	0	0	3

		M.E- HEAT POWER ENGINEERING				
LIST OF OPEN ELECTIVE						
S.No	**COURS ECODE**	**COURSE NAME**	**TEACHING SCHEME**			**CREDITS**
			L	**T**	**P**	
1	OE01	Industrial Safety	3	0	0	3
2	OE02	Waste Heat Recovery	3	0	0	3
3	OE03	Product Design and Process Development	3	0	0	3
4	OE04	Power Plant Management and Cost Estimations	3	0	0	3
5	OE05	Automobile Engineering	3	0	0	3
6	OE06	Vehicles Automation	3	0	0	3
7	OE07	Nuclear Engineering	3	0	0	3
8	OE08	Entrepreneurship Development and Management	3	0	0	3

		M.E- HEAT POWER ENGINEERING				
		LIST OF EMPLOYABILITY ENHANCEMENT COURSES (EEC)				
S.No	**COURS ECODE**	**COURSE NAME**	**TEACHING SCHEME**			**CREDITS**
			L	**T**	**P**	
1	19MMH41	Project Viva-Voce/Industrial Training	0	0	0	18
2	EEC01	Internet of Things (IoT) for Thermal Sciences	0	0	4	2
3	EEC02	English for Research Paper Writing	0	0	4	2
4	EEC03	Constitution of India	0	0	4	2
5	EEC04	Pedagogy Studies	0	0	4	2
6	EEC05	Personality and Skill Development	0	0	4	2
7	EEC06	Intellectual Property Rights and Patents	0	0	4	2
8	EEC07	Seminar & Term Paper Writing	0	0	4	2
9	EEC08	Study of Indian Economy	0	0	4	2
10	EEC09	Python Programming	0	0	4	2

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
M.E. COMPUTER SCIENCE AND ENGINEERING

SUBJECTS OF STUDY

Semester I

Course Code	Course Name	Category	L	T	P	C
19MCS11	Graph theory and Linear algebra	FC	3	0	0	3
19MCS12	Design and Analysis of Algorithms	PC	3	1	0	4
19MCS13	Software Engineering Methodologies	PC	3	1	0	4
19MCS14	Artificial Intelligence	PC	3	0	0	3
	Professional Elective I	PE	3	0	0	3
19MCS15	Artificial Intelligence Laboratory	LC	0	0	4	2
19MCS16	Design and Analysis of Algorithms Laboratory	LC	0	0	4	2
	TOTAL CREDITS		**15**	**2**	**8**	**21**

Semester II

Course Code	Course Name	Category	L	T	P	C
19MCS21	Probability and Statistics	FC	3	1	0	4
19MCS22	Machine Learning	PC	3	0	0	3
19MCS23	Database Engineering	PC	3	1	0	4
	Professional Elective -II	PE	3	0	0	3
	Professional Elective -III	PE	3	0	0	3
19MCS24	Machine Learning Laboratory	LC	0	0	4	2
19MCS25	Mini Project	EEC	0	0	6	3
	TOTAL CREDITS		**15**	**2**	**10**	**22**

Semester III

Course Code	Course Name	Category	L	T	P	C
	Professional Elective -IV	PE	3	0	0	3
	Professional Elective -V	PE	3	0	0	3
	Open Elective*	OE	3	0	0	3
	Python Programming	EEC	0	0	2	1
	TOTAL CREDITS		**9**	**0**	**2**	**10**

* Open Elective can be opted from same stream or from other streams.

Semester IV

Course Code	Course Name	Category	L	T	P	C
19MCS41	Project and Viva-Voce	EEC	0	0	36	18
	TOTAL CREDITS		**0**	**0**	**36**	**18**

Total Credits : 71

FOUNDATION COURSE (FC)

Course Code	Course Name	L	T	P	C	Semester
19MCS11	Graph theory and Linear algebra	3	0	0	3	1
19MCS21	Probability and Statistics	3	1	0	4	2

PROFESSIONAL CORE (PC)

Course Code	Course Name	L	T	P	C	Semester
19MCS12	Design and Analysis of Algorithms	3	1	0	4	1
19MCS13	Software Engineering Methodologies	3	1	0	4	1
19MCS14	Artificial Intelligence	3	0	0	3	1
19MCS22	Machine Learning	3	0	0	3	2
19MCS23	Database Engineering	3	1	0	4	2

LABORATORY COURSE (LC)

Course Code	Course Name	L	T	P	C	Semester
19MCS15	Artificial Intelligence Laboratory	0	0	4	2	1
19MCS16	Design and Analysis of Algorithms Laboratory	0	0	4	2	1
19MCS24	Machine Learning Laboratory	0	0	4	2	2

EMPLOYABILITY ENHANCEMENT COURSE (EEC)

Course Code	Course Name	L	T	P	C	Semester
19MCS25	Mini Project	0	0	6	3	2
19MCS41	Project	0	0	36	18	4
19MCSOC01	Python Programming	0	0	2	1	3

PROFESSIONAL ELECTIVES (PE)

Course Code	Course Name	L	T	P	C
19MCSE01	Cryptography and Network Security	3	0	0	3
19MCSE02	High Performance Computing	3	0	0	3
19MCSE03	Neural Networks	3	0	0	3
19MCSE04	Open Source systems	3	0	0	3
19MCSE05	Approximation Algorithm	3	0	3	3
19MCSE06	Internet Technologies	3	0	0	3
19MCSE07	Data Warehousing and Data Mining	3	0	0	3
19MCSE08	Business Intelligence	3	0	0	3
19MCSE09	Cloud Computing	3	0	0	3
19MCSE10	Information Security	3	0	0	3
19MCSE11	Knowledge based AI	3	0	0	3
19MCSE12	Software Metrics and Measurements	3	0	0	3
19MCSE13	Robot Human Interaction	3	0	0	3
19MCSE14	Big Data Analytics	3	0	0	3
19MCSE15	Deep Learning	3	0	0	3
19MCSE16	Bio informatics	3	0	0	3
19MCSE17	Internet of Things	3	0	0	3
19MCSE18	Web Engineering	3	0	0	3
19MCSE19	Parallel Algorithms	3	0	0	3
19MCSE20	Computer Vision	3	0	0	3
19MCSE21	Case Based Reasoning	3	0	0	3
19MCSE22	Multimedia Systems	3	0	0	3
19MCSE23	Ad Hoc Networks	3	0	0	3
19MCSE24	Wireless Sensor Networks	3	0	0	3
19MCSE25	Secure Software Engineering	3	0	0	3
19MCSE26	Service Oriented Architecture	3	0	0	3
19MCSE27	Human Computer Interaction	3	0	0	3
19MCSE28	Social Network Analysis	3	0	0	3
19MCSE29	Advanced cryptography and practices	3	0	0	3
19MCSE30	Blockchain design and their use cases	3	0	0	3

Course Code	Course Name	L	T	P	C
PROFESSIONAL ELECTIVES (PE)					
19MCSOE01	Optimization Techniques	3	0	0	3
19MCSOE02	Mobile Applications and Services	3	0	0	3
19MCSOE03	Soft Computing	3	0	0	3
19MCSOE04	Digital Forensics	3	0	0	3
19MCSOE05	Data Science	3	0	0	3
19MCSOE06	Introduction to Intelligent Systems	3	0	0	3

S.No.	Course Category	Credits as per semester				Category Wise Credits distribution
		I	II	III	IV	
1	FC	3	4	-	-	7
2	PC	11	7	-	-	18
3	LC	4	2	-	-	6
4	PE	3	6	6	-	15
5	OE	-	-	3	-	3
6	EEC	-	3	1	18	22
	Semester Wise Credits distribution	**21**	**22**	**10**	**18**	**71**

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

MASTER OF COMPUTER APPLICATIONS

UNDER CHOICE BASED CREDIT SYSTEM

Curriculum from the Academic Year 2018 - 2019 onwards

Semester I

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA11	Theory of Computing	3	0	0	3	FC
18MCA12	Data Structures	3	0	0	3	FC
18MCA13	Programming in C	3	0	0	3	PC
18MCA14	Computer Organization	3	0	0	3	FC
18MCA15	Probability and Statistics	3	0	0	3	PC
	PRACTICALS					
18MCA16	C Programming Laboratory	0	0	4	2	PC
18MCA17	User Experience Laboratory	0	0	4	2	FC
18MCA18	Statistics Laboratory	0	0	4	2	FC
18MCA19	Communication Skills	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester II

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA21	Design and Analysis of Algorithms	3	0	0	3	FC
18MCA22	Object Oriented Principles and Programming in JAVA	3	0	0	3	PC
18MCA23	Principles of Operating System	3	0	0	3	PC
18MCA24	Database Management Systems	3	0	0	3	PC
18MCA25	Software Engineering	3	0	0	3	PC
	PRACTICAL					
18MCA26	Algorithms and Operating Systems Laboratory	0	0	4	2	PC
18MCA27	Object Oriented Programming Laboratory	0	0	4	2	PC
18MCA28	RDBMS Laboratory	0	0	4	2	PC
18MCA29	Professional English	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester III

Course Code	PROFESSIONAL ELECTIVES (PE) Course Name	L	T	P	C	Category
	THEORY					
18MCA31	Numerical Methods and Applied Statistics	4	0	0	4	FC
18MCA32	Computer Networks	3	0	0	3	PC
18MCA33	Artificial Intelligence	3	0	0	3	PC
18MCA34	SOA and Web Services	3	0	0	3	PC
	Elective I	3	0	0	3	PE
	PRACTICAL					
18MCA35	Advanced Programming Laboratory	0	0	4	2	PC
18MCA36	Artificial Intelligence Laboratory	0	0	4	2	PC
18MCA37	Network Programming Laboratory	0	0	4	2	PC
18MCA38*	Personality Development					EEC
	TOTAL CREDITS				**22**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
	THEORY					
18MCA41	Operations Research	4	0	0	4	FC
18MCA42	Data Mining and Warehousing	3	0	0	3	PC
18MCA43	Accounting and Financial Management	4	0	0	4	PC
	Elective II	3	0	0	3	PE
	Elective III	3	0	0	3	PE
	PRACTICAL					
18MCA44	Data Mining Laboratory	0	0	4	2	PC
	Elective Laboratory	0	0	4	2	PE
18MCA45	Mini Project	0	0	4	2	EEC
	TOTAL CREDITS				**23**	

Semester V

Course Code	PROFESSIONAL ELECTIVES (PE) Course Name	L	T	P	C	Category
	THEORY					
18MCA51	Software Testing and Quality Assurance	3	0	0	3	PC
18MCA52	Cryptography and Network Security	3	0	0	3	PC
	Elective IV	3	0	0	3	PE
	Elective V	3	0	0	3	PE
	Elective VI	3	0	0	3	PE
	PRACTICAL					
18MCA53	Software Testing Laboratory	0	0	4	2	PC
18MCA54	Information Security Laboratory	0	0	4	2	PC
18MCA55*	Professional Ethics					EEC
	TOTAL CREDITS				**19**	

Semester VI

Course Code	Course Name	L	T	P	C	Category
18MCA61	Project work and Viva voce				18	EEC
	TOTAL CREDITS				**18**	

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTING

M.Sc. (Software Systems)

Curriculum from the Academic Year 2015 - 2016 and onwards

Semester I

Course Code	Course Name	L	T	P	C	CAT
15MSS11	Technical English	3	0	0	3	HS
15MSS12	Algebra and Calculus	3	2	0	4	BS
15MSS13	Problem Solving and Programming in C	3	2	0	4	PC
15MSS14	Basics of Information Systems	3	0	0	3	ES
15MSS15	Digital Electronics	3	0	0	3	ES
15MSS16	Programming Laboratory in C	0	0	4	2	PC
15MSS17	Digital Electronics Laboratory	0	0	4	2	ES
15MSS18	Computing Laboratory	0	0	4	2	BS
15MSS19	English Language Laboratory	0	0	2	1	HS
	TOTAL CREDITS				**24**	

Semester II

Course Code	Course Name	L	T	P	C	CAT
	Language Elective	3	0	0	3	HS
15MSS21	Probability and Statistics	3	2	0	4	BS
15MSS22	Fundamentals of Web Technology	3	0	0	3	PC
15MSS23	Data Structures and Algorithms	3	2	0	4	PC
15MSS24	Object Oriented Programming	3	0	0	3	PC
15MSS25	Data Structures and Algorithms Laboratory	0	0	4	2	PC
15MSS26	Object Oriented Programming Laboratory	0	0	4	2	PC
15MSS27	Scripting Laboratory	0	0	4	2	PC
	TOTAL CREDITS				**23**	

Semester III

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
15MSS31	Discrete Mathematical Structures	3	2	0	4	BS
15MSS32	Computer Architecture	3	0	0	3	PC
15MSS33	Operating Systems	3	0	0	3	PC
15MSS34	Advanced Data Structures and Algorithms	3	0	0	3	PC
15MSS35	Software Engineering	3	0	0	3	PC
	PRACTICALS					
15MSS36	Advanced Datastructures and Algorithms Laboratory	0	0	4	2	PC
15MSS37	Visual Programming Laboratory	0	0	4	2	PC
15MSS38	Operating Systems Laboratory	0	0	4	2	PC
15MSS49	Communication Skills & Personality Development*					EEC
	TOTAL CREDITS				**22**	

* A pass is required

Semester IV

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
15MSS41	Resource Management Techniques	3	2	0	4	BS
15MSS42	Theory of Computing	3	0	0	3	PC
15MSS43	Microprocessors and Assembly Language Programming	3	0	0	3	PC
15MSS44	Database Management Systems	3	0	0	3	PC
15MSS45	Java Programming	3	0	0	3	PC
	PRACTICALS					
15MSS46	Microprocessors Laboratory	0	0	4	2	PC
15MSS47	Database Management Systems Laboratory	0	0	4	2	PC
15MSS48	Java Programming Laboratory	0	0	4	2	PC
15MSS49	Communication Skills & Personality Development*					EEC
	TOTAL CREDITS				**22**	

* A pass is required

Semester V

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
15MSS51	Computational Intelligence	3	0	0	3	PC
15MSS52	Object Oriented Software Engineering	3	0	0	3	PC
15MSS53	Computer Networks	3	0	0	3	PC
	Elective - I	3	0	0	3	PE
	Elective - II	3	0	0	3	PE
	PRACTICALS					
15MSS54	Object Oriented Software Development Laboratory	0	0	4	2	PC
15MSS55	Network Programming Laboratory	0	0	4	2	PC
	Elective Laboratory - I	0	0	4	2	PE
	TOTAL CREDITS				**22**	

Semester VI

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
15MSS61	Software Architecture	3	0	0	3	PC
15MSS62	Mobile Computing	3	0	0	3	PC
15MSS63	Software Testing and Quality Assurance	3	0	0	3	PC
	Elective - III	3	0	0	3	PE
	Elective- IV	3	0	0	3	PE
	PRACTICALS					
15MSS64	Mobile Application Development Laboratory	0	0	4	2	PC
15MSS65	Software Testing Laboratory	0	0	4	2	PC
	Elective Laboratory - II	0	0	4	2	PE
	TOTAL CREDITS				**23**	

Semester VII

Course Code	Course Name	L	T	P	C	CAT
15MSS71	Project Work and Viva Voce - I	0	0	0	18	EEC
	TOTAL CREDITS				**18**	

Semester VIII

PROFESSIONAL ELECTIVES (PE)

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
15MSS81	Software Project Management	3	0	0	3	PC
15MSS82	Internet of Things	3	0	0	3	PC
	Elective - V	3	0	0	3	PE
	Elective - VI	3	0	0	3	PE
	Elective - VII	3	0	0	3	PE
	PRACTICALS					
15MSS83	Internet of Things Laboratory	0	0	4	2	PC
	Elective Laboratory - III	0	0	4	2	PE
	Elective Laboratory - IV	0	0	4	2	PE
	TOTAL CREDITS				**21**	

Semester IX

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
15MSS91	Information Security	3	0	0	3	PC
15MSS92	Professional Ethics	3	0	0	3	EEC
	Elective - VIII	3	0	0	3	PE
	Elective - IX	3	0	0	3	PE
	Elective - X	3	0	0	3	PE
	PRACTICALS					
15MSS93	Information Security Laboratory	0	0	4	2	PC
	Elective Laboratory - V	0	0	4	2	PE
	Elective Laboratory - VI	0	0	4	2	PE
	TOTAL CREDITS				**21**	

Semester X

Course Code	Course Name	L	T	P	C	CAT
15MSS101	Project Work and Viva Voce - II	0	0	0	18	EEC
	TOTAL CREDITS				**18**	
	GRAND TOTAL OF CREDITS				**215**	

PROFESSIONAL ELECTIVES

PROFESSIONAL ELECTIVES (PE) Course Name		L	T	P	C	CAT
	GENERAL STREAM					
15MSSE01	Software User Interface Design	3	0	0	3	PE
15MSSE02	Software Language Engineering	3	0	0	3	PE
15MSSE03	Enterprise Application Development	3	0	0	3	PE
15MSSE04	Data Centric Computing	3	0	0	3	PE
15MSSE05	Agile Process Models	3	0	0	3	PE
15MSSE06	Software Requirements Engineering	3	0	0	3	PE
15MSSE07	Software Reliability	3	0	0	3	PE
15MSSE08	Open Source Software Development	3	0	0	3	PE
15MSSE09	Graphics and Multimedia Technologies	3	0	0	3	PE
15MSSE10	IT infrastructure Management	3	0	0	3	PE
15MSSE11	Bio-Informatics	3	0	0	3	PE
15MSSE12	Accounting and Financial Management	3	0	0	3	PE
15MSSE13	Geographic Information System	3	0	0	3	PE
15MSSE14	Design Thinking	3	0	0	3	PE
15MSSE15	Business Process Management	3	0	0	3	PE
15MSSE16	Human Resource Management	3	0	0	3	PE
	DISTRIBUTED AND NETWORKED SYSTEMS STREAM					
15MSSE17	Internetworking Protocols	3	0	0	3	PE
15MSSE18	Distributed Computing	3	0	0	3	PE
15MSSE19	SOA and Web Services	3	0	0	3	PE
15MSSE20	Cloud Computing	3	0	0	3	PE
15MSSE21	Parallel Computing	3	0	0	3	PE
15MSSE22	Software Defined Networks	3	0	0	3	PE
15MSSE23	Autonomic Computing	3	0	0	3	PE
	EMBEDDED AND AUTONOMOUS SYSTEM STREAM					
15MSSE24	Real Time Systems	3	0	0	3	PE
15MSSE25	Analysis and Design of Real Time Systems	3	0	0	3	PE
15MSSE26	Embedded Processors	3	0	0	3	PE
15MSSE27	Computer vision	3	0	0	3	PE
15MSSE28	Sensing and Sensors	3	0	0	3	PE
15MSSE29	Mechanics of Robotic manipulation	3	0	0	3	PE
	DATAANALYTICS STREAM					
15MSSE30	Advanced Database Concepts	3	0	0	3	PE
15MSSE31	Data Mining	3	0	0	3	PE
15MSSE32	Big Data Analytics	3	0	0	3	PE
15MSSE33	Business Intelligence	3	0	0	3	PE
15MSSE34	Machine Learning	3	0	0	3	PE

COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTING

M.Sc. DECISION AND COMPUTING SCIENCES

Curriculum from the Academic Year 2017 - 2018 onwards

Semester I

Course Code	Course Name	L	T	P	C	Category
	THEORY					
17MDC11	Technical English	3	0	0	3	HS
17MDC12	Applied Algebra and Calculus	3	2	0	4	BS
17MDC13	Basic Statistical Methods	3	2	0	4	BS
17MDC14	Human Behavior	3	0	0	3	PC
17MDC15	Programming in C	3	0	0	3	PC
	PRACTICALS					
17MDC16	Computing Laboratory I (Algebra, Calculus and Statistics in SciLab and Excel)	0	0	4	2	PC
17MDC17	Programming Laboratory in C	0	0	4	2	PC
17MDC18	English Language Laboratory	0	0	2	1	EEC / HS
	Total Credits				**22**	

Semester II

Course Code	Course Name	L	T	P	C	Category
	THEORY					
	Language Elective	3	0	0	3	HS
17MDC21	Probability and Applications	3	2	0	4	BS
17MDC22	Principles of Management	4	0	0	4	PC
17MDC23	Web Technology	3	0	0	3	PC
17MDC24	Data Structures and Algorithms	3	0	0	3	PC
	PRACTICALS					
17MDC25	Computing Laboratory II (Probability in Excel and SciLab)	0	0	4	2	PC
17MDC26	Web Technology Laboratory	0	0	4	2	PC
17MDC27	Data Structures Laboratory using Python	0	0	4	2	PC
	Total Credits				**23**	

Semester III

Course Code	Course Name	L	T	P	C	Category
	THEORY					
17MDC31	Applied Statistics for Business Decisions	3	2	0	4	BS
17MDC32	Financial Analysis and Reporting	4	0	0	4	PC
17MDC33	Computer Systems	3	0	0	3	PC
17MDC34	Database Management Systems	3	0	0	3	PC
17MDC35	Object Oriented Programming	3	0	0	3	PC
	PRACTICALS					
17MDC36	Business Statistics Laboratory using R	0	0	4	2	PC
17MDC37	Business Database Design Laboratory	0	0	4	2	PC
17MDC38	Object Oriented Programming Laboratory using Java	0	0	4	2	PC
	Total Credits				**23**	

Semester IV

Course Code	Course Name	L	T	P	C	Category
	THEORY					
17MDC41	Predictive Analytics	3	0	0	3	BS
17MDC42	Operations Research for Business	3	2	0	4	BS
17MDC43	Corporate Finance	3	0	0	3	PC
17MDC44	Production and Operations Management	3	0	0	3	PC
17MDC45	Computer Networks	3	0	0	3	PC
	PRACTICALS					
17MDC46	Predictive Analytics Laboratory	0	0	4	2	PC
17MDC47	Business Process Optimization Laboratory (OR & POM)	0	0	4	2	PC
17MDC48	Financial Analysis Laboratory (Spreadsheets and Python)	0	0	4	2	PC
17MDC49	Managerial Communication Skills*					EEC
	Total Credits				**22**	

PROFESSIONAL ELECTIVES (PE)

Semester V

Course Code	Course Name	L	T	P	C	Category
	THEORY					
17MDC51	Organisational Behavior	3	0	0	3	PC
17MDC52	Digital Marketing	3	0	0	3	PC
17MDC53	Software Engineering	3	0	0	3	PC
17MDC54	Enterprise Resource Planning	3	0	0	3	PC
	Elective I	3	0	0	3	PE
	PRACTICALS					
17MDC55	Human Resources System Development Laboratory (Python,R studio)	0	0	4	2	PC
17MDC56	Digital Marketing Design Laboratory (R Studio, Visualisation, Graphical)	0	0	4	2	PC
17MDC57	Enterprise Application Development Laboratory (J2EE)	0	0	4	2	PC
17MDC58	Personality Development*					EEC
	Total Credits				**21**	

Semester VI

Course Code	Course Name	L	T	P	C	Category
	THEORY					
17MDC61	Economic Foundations of Business	3	0	0	3	PC
17MDC62	Computational Intelligence	3	0	0	3	PC
17MDC63	Mobile and Cloud Computing	3	0	0	3	PC
17MDC64	Data Warehousing and Mining	3	0	0	3	PC
	Elective - II	3	0	0	3	PE
	PRACTICALS					
17MDC65	Mobile and Cloud Application Development Laboratory	0	0	4	2	PC
17MDC66	Data Mining Laboratory	0	0	4	2	PC
	Elective Laboratory - I	0	0	4	2	EEC
	Total Credits				**21**	

Semester VII

Course Code	Course Name	L	T	P	C	Category
17MDC71	Project Work and Viva Voce-I	0	0	0	18	EEC
	Total Credits				**18**	

Semester VIII

Course Code	Course Name	L	T	P	C	Category
	THEORY					
17MDC81	Modeling and Simulation	3	0	0	3	PC
17MDC82	Decision Support Systems	3	0	0	3	PC
17MDC83	Game Theory and Decision Analysis	3	0	0	3	PC
	Elective - III	3	0	0	3	PE
	Elective - IV	3	0	0	3	PE
	PRACTICALS					
17MDC84	Business Intelligence Laboratory	0	0	4	2	PC
17MDC85	Decision Analysis Laboratory (Game Theory)	0	0	4	2	EEC
17MDC86	Entrepreneurship Development*					EEC
	Elective - Laboratory II	0	0	4	2	PC
	Total Credits				**21**	

Semester IX

Course Code	Course Name	L	T	P	C	Category
	THEORY					
17MDC91	Principles of Information Security	3	0	0	3	PC
17MDC92	Project Management	3	0	0	3	PC
17MDC93	Human Computer Interface and Interaction	3	0	0	3	PC
	Elective - V	3	0	0	3	PE
	Elective - VI	3	0	0	3	PE
	PRACTICALS					
17MDC94	Human Computer Interface and Interaction Laboratory	0	0	4	2	PC
17MDC95	Minor Project - Decision Tool Development	0	0	8	4	EEC
17MDC96	Business Ethics *					EEC
	Total Credits				**21**	

Semester X

Course Code	Course Name	L	T	P	C	Category
17MDC101	Project Work and Viva Voce- II	0	0	0	18	EEC
	Total Credits				**18**	
	Grand Total of Credits				**210**	

*Pass is required